

**09 828302**

TI Protein and cDNA sequence of Physcomitrella patens signal transduction stress-related proteins and uses in plants for increased tolerance to environmental stresses

IN \*\*\*Da Costa e Silva, Oswaldo\*\*\* ; \*\*\*Bohnert, Hans J.\*\*\* ; \*\*\*Van\*\*\*  
\*\*\* Thielen, Nocha\*\*\* ; \*\*\*Chen, Ruoying\*\*\* ; \*\*\*Ishitani, Manabu\*\*\*

PA BASF Plant Science G.m.b.H., Germany

SO PCT Int. Appl., 101 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 5

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI	WO 2001077355	A2	20011018	WO 2001-US11398 20010406
----	---------------	----	----------	--------------------------

TI Moss genes from \*\*\*Physcomitrella\*\*\* \*\*\*patens\*\*\* encoding proteins involved in the synthesis of carbohydrates

IN Lerchl, Jens; Renz, Andreas; Ehrhardt, Thomas; Reindl, Andreas; Cirpus, Petra; Bischoff, Friedrich; Frank, Markus; Freund, Annette; Duwenig, Elke; Schmidt, Ralf-Michael; Reski, Ralf

PA Basf Plant Science G.m.b.H., Germany

SO PCT Int. Appl., 133 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI	WO 2001044476	A2	20010621	WO 2000-EP12697 20001214
----	---------------	----	----------	--------------------------



68878

STIC-Biotech/Ch mLib

From: Collins, Cynthia  
Sent: Friday, June 14, 2002 6:07 PM  
Subject: STIC-Biotech/ChemLib  
sequence search request SN 09/828302

Please search, both prior art and interference, for SN 09/828302:

- 1) SEQ ID NO:9
- 2) SEQ ID NO:14

Thank You,

Cynthia Collins  
Art Unit 1638  
CM1, 9A12 (office) or 9E12 (mailbox)  
(703) 605-1210

FD. 4/6/01 No art  
Prov 4/7/00 @ 100%  
1026 4/7/99

RECEIVED  
JUN 17 2002  
STIC

if Contact: Sheppard  
Searcher: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Location: \_\_\_\_\_  
Date Picked Up: \_\_\_\_\_  
Date Completed: 6/21/02  
Searcher Prep/Review: \_\_\_\_\_  
Clerical: \_\_\_\_\_  
Online time: \_\_\_\_\_

TYPE OF SEARCH:  
NA Sequences: \_\_\_\_\_  
AA Sequences: \_\_\_\_\_  
Structures: \_\_\_\_\_  
Bibliographic: \_\_\_\_\_  
Litigation: \_\_\_\_\_  
Full text: \_\_\_\_\_  
Patent Family: \_\_\_\_\_  
Other: \_\_\_\_\_

VENDOR/COST(where applic.)  
STN: \_\_\_\_\_  
DIALOG: \_\_\_\_\_  
Questel/Orbit: \_\_\_\_\_  
DRLink: \_\_\_\_\_  
Lexis/Nexis: \_\_\_\_\_  
Sequence Sys.: \_\_\_\_\_  
WWW/Internet: \_\_\_\_\_  
Other (specify): \_\_\_\_\_





GenCore version 4.5  
Copyright (c) 1993 - 2000 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: June 19, 2002, 17:46:14 ; Search time 1689.55 seconds  
(without alignments)  
10752.509 Million cell updates/sec

Title: US-09-828-302-9  
Perfect score: 1346  
Sequence: 1 gcgatatcgatttgcaagg.....ccttctgccttcgatcgc 1346

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 13736207 seqs, 6748477542 residues  
Total number of hits satisfying chosen parameters: 27472414

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : EST:\*

1:	em_estba:*
2:	em_esthum:*
3:	em_estin:*
4:	em_estmu:*
5:	em_estov:*
6:	em_estpl:*
7:	em_estro:*
8:	em_htc:*
9:	gb_est1:*
10:	gb_est2:*
11:	gb_htc:*
12:	gb_gss:*
13:	em_gss_hum:*
14:	em_gss_inv:*
15:	em_gss_pln:*
16:	em_gss_vrt:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	245.6	18.2	799	10	BI405732
2	229	17.0	414	10	BJ196973
3	213.4	15.9	727	10	BG595786
4	205.8	15.3	577	10	BE805365
5	196.8	14.6	520	10	BE556233
6	191.6	14.2	704	10	BI269796
7	189.4	14.1	527	10	BI701028
8	186.2	13.8	497	10	BI701941
9	185.4	13.8	664	10	BF650146
10	182.8	13.6	609	10	BE330853
11	181.6	13.5	493	10	BE941416
12	177.2	13.2	478	9	BE021852
13	175.4	13.0	680	10	BE819869
14	175	13.0	516	10	BI307827
15	171.6	12.7	638	10	BG587548
16	166.8	12.4	439	9	BE057640
17	166.4	12.4	394	9	AI938822

18	166	12.3	628	9	AI795639	AI795639 614004F06
19	164.6	12.2	666	10	BF635584	BF635584 NF080F07D
20	162.6	12.1	752	10	BG647922	BG647922 EST509541
21	160.4	11.9	510	10	BI469962	BI469962 saf45g11.
22	160	11.9	583	9	AI770324	AI770324 606061A06
23	159.4	11.8	667	9	AI881291	AI881291 606065F12
24	156.8	11.6	556	10	BF632292	BF632292 NF017E08D
25	156.2	11.6	446	9	AU172997	AU172997 AU172997
26	154.4	11.5	582	9	AW146619	AW146619 614074F04
27	152.6	11.3	723	10	BE660717	BE660717 539 GmaxS
28	151.6	11.3	613	10	BF595352	BF595352 su65b08.y
29	151.4	11.2	519	10	BF008775	BF008775 ss79h02.y
30	150.4	11.2	597	9	AW185772	AW185772 se59d11.y
31	150.2	11.2	574	10	BI785332	BI785332 sai39g06.
32	150	11.1	583	9	AW755381	AW755381 sl03c07.y
33	150	11.1	635	10	BG238499	BG238499 sab51d08.
34	149.8	11.1	567	10	BM093484	BM093484 saj09e03.
35	149.8	11.1	576	10	BM309395	BM309395 sak58b02.
36	149.8	11.1	577	9	BE020461	BE020461 sm44a09.y
37	149.8	11.1	579	10	BM093479	BM093479 saj09d09.
38	149.8	11.1	586	10	BI424567	BI424567 sah52h11.
39	149.8	11.1	696	10	BE660711	BE660711 760 GmaxS
40	149.4	11.1	545	10	BF598317	BF598317 sv16b05.y
41	148.8	11.1	598	10	BG045998	BG045998 saa47d05.
42	148.6	11.0	611	9	AW100049	AW100049 sd25e05.y
43	148.2	11.0	513	10	BG509559	BG509559 sad18e11.
44	147.2	10.9	560	10	BF648487	BF648487 NF048A08E
45	147.2	10.9	593	9	AW692843	AW692843 NF056C09S

ALIGNMENTS

RESULT 1  
BI405732  
LOCUS BI405732 799 bp mRNA linear EST 14-AUG-2001  
DEFINITION 115F11 Mature tuber lambda ZAP Solanum tuberosum cDNA, mRNA  
sequence.  
ACCESSION BI405732  
VERSION BI405732.1 GI:15185146  
KEYWORDS EST.  
SOURCE potato.  
ORGANISM Solanum tuberosum  
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Solanum.  
REFERENCE 1 (bases 1 to 799)  
AUTHORS Nielsen,K.L, Crookshanks,M., Emmersen,J. and Welinder,K.G.  
TITLE EST-sequencing of mature potato tuber (Var. Kuras)  
JOURNAL Unpublished (2000)  
COMMENT Contact: Karen G. Welinder  
Institut for bioteknologi  
Aalborg Universitet  
Sohngaardsholmsvej 49, 9000 Aalborg, Denmark  
Tel: +45 96358467  
Fax: +45 98141808  
Email: kgw@bio.auc.dk  
Sequenced from the 5' end.  
High quality sequence stop: 799  
POLYA=No.

FEATURES  
source Location/Qualifiers  
1. .799  
/organism="Solanum tuberosum"  
/cultivar="Field grown Kuras"  
/db\_xref="taxon:4113"  
/clone\_lib="Mature tuber lambda ZAP"  
/tissue\_type="Tuber"  
/note="Vector: Lambda ZAP"  
BASE COUNT 236 a 144 c 200 g 219 t  
ORIGIN

Query Match

18.2%; Score 245.6; DB 10; Length 799;



















XhoI; cDNA was prepared from polyA+ enriched RNA. The cDNA was directionally ligated into the Unizap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-Zap phage using Ex-assist helper phage and propagated in XL0LR cells."

BASE COUNT	141 a	79 c	127 g	146 t
ORIGIN				
Query Match	13.5%;	Score 181.6;	DB 10;	Length 493;
Best Local Similarity	62.1%;	Pred. No. 2.2e-40;		
Matches 303;	Conservative 0;	Mismatches 184;	Indels 1;	Gaps 1;
QY	566	gtggctctgattcgtggcgaataaactgttcgtcgcaaacgctggagactctcgtgcata	625	
Db	7	GTTCAGTTATTAGAAACAACCAAGTTGTGTGCAAATGCTGGTGATCCCGTTGTGTA	66	
QY	626	atgtctcgacgtggcgaggctgttaaactctctcgattgatcacaaacccaacccatagacat	685	
Db	67	ATATCTCGGAAGGCGCAGCGGTACAATTTGTCTAGAGACCACAAACCTGATCTTGAGATT	126	
QY	686	gagagaaaagatagagagtgctggaggcttcgtcccatggtggtggtttaacggttagt	745	
Db	127	GAAAGG-AAAGAATCTTAAAGCTGGTGGTTTATTTCATGCAGGACGAGTGAATGCCAGT	185	
QY	746	ctaaactttacaagagcaataggggacatggaattcaagggtcgacctgattgccacct	805	
Db	186	TTAAACCTTGCAAGAGCTATTGGTGACATGGAATTAAACAGAAATAAGTTCTTCCCGCT	245	
QY	806	gacaagcaagtagtgacgtgctgtcccgatgtgtcgaagttgaccttggaccggggat	865	
Db	246	GAAAGCAAGTTGTAACCTGCCAATCCAGATATAACACTGTTGAGCTTTGTGATGAAGAT	305	
QY	866	gaatttatcgtgctggcctgtgatggaatatgggatgttatgtctagtcaagctgctgtg	925	
Db	306	GAGTTATGGTGTGGCTTGTGATGGCATATGGGACTGCTTGTCAAGTCAACAATTGGTA	365	
QY	926	gacttcgttaaatcaagattacctaaccacaaaactctatcatcttctgtgtgaggagata	985	
Db	366	GATTAGTTCATGACAAACTGTGTTCCGGAACGAGACTTCTACAGTGTGTGAAAGAGTA	425	
QY	986	ctggattactgctgtccccaaccaccccgacgaagaagatgtgataaacatgagcatc	1045	
Db	426	CTTGACCGGTGTTGGCACCATCAACTGCTGGTGGCGAAGGATGTGTATAACATGACCATG	485	
QY	1046	attatagt	1053	
Db	486	ATCTTGGT	493	

RESULT 12	BE021852	478 bp	mRNA	linear	EST 03-DEC-2001			
LOCUS	sm63c10.y1	Gm-cl028	Glycine max	cDNA clone	GENOME SYSTEMS CLONE ID:			
DEFINITION	Gm-cl028-8587	5' similar to	TR:O81716	O81716	PROTEIN PHOSPHATASE 2C			
		- LIKE PROTEIN.	;;	mRNA	sequence.			
ACCESSION	BE021852							
VERSION	BE021852.1	GI:8284293						
KEYWORDS	EST.							
SOURCE	soybean.							
ORGANISM	Glycine max							
	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;							
	Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;							
	Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae;							
	Glycine.							
REFERENCE	1 (bases 1 to 478)							
AUTHORS	Shoemaker,R., Keim,P., Vodkin,L., Erpelding,J., Coryell,V., Khanna							
	,A., Bolla,B., Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C.,							
	Wyllie,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers							
	,Y., Person,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk							
	,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann							
	,R., Waterston,R. and Wilson,R.							

TITLE  
JOURNAL  
COMMENT  
Public Soybean EST Project  
Unpublished (1999)  
Contact: Shoemaker R/Public Soybean EST Project  
Public Soybean EST Project  
Washington University School of Medicine  
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA  
Tel: 314 286 1800  
Fax: 314 286 1810  
Email: est@watson.wustl.edu  
This clone is available through: ResGen, Invitrogen Corp. 2130  
South Memorial Parkway Huntsville, AL 35801 For further information  
call: (800)-533-4363 or contact via email: ccu@resgen.com  
Insert Length: 1155 Std Error: 0.00  
High quality sequence stop: 426.

FEATURES  
Location/Qualifiers  
1..478  
/organism="Glycine max"  
/db\_xref="taxon:3847"  
/clone="GENOME SYSTEMS CLONE ID: Gm-cl028-8587"  
/clone\_lib="Gm-cl028"  
/tissue\_type="roots of 'Supernod' plants"  
/lab\_host="DH10B"  
/note="Vector: pBluescript II XR; Site\_1: EcoRI; Site\_2: XhoI; The mRNA was isolated from roots of Glycine max 'Supernod' plants generously donated by Dr. Gary Stacey. The seedlings were inoculated with Bradyrhizobium japonicus, strain USDA110 prior to harvest. Stratagene's cDNA synthesis kit (catalog number 200401) was used to synthesize the cDNA. First-strand synthesis was performed with 5-methyl dCTP, hence the ligated cDNA was hemimethylated. A modification of Stratagene's first-strand synthesis primer was used. An 'anchor' nucleotide (V=A,C, or G) was added to the 3' end of the primer [GAGAGAGAGAGAGAGAGAACTAGTCTCGAG(T)18V] to anchor the primer at the 5' end of the poly(A) tract. After second-strand synthesis, the cDNA ends were filled in with cloned Pfu DNA polymerase, ligated to EcoRI adapters and subsequently phosphorylated. The XhoI site within the first-strand synthesis primer was then restricted by digestion with XhoI; all XhoI sites in the cDNA would be protected by their hemimethylated status. The cDNA constructs were size-fractionated with a 500bp cutoff, using GibcoBRL Life Technologies' cDNA Size Fractionation column. The column eluent was then ligated into Stratagene's pBluescript II XR Predigested vector (pBluescript II SK(+)) that has been digested with EcoRI and XhoI, and phosphorylated by Stratagene). Both the white and blue colonies appear to contain recombinant plasmids with cDNA inserts, based on size (n=25). This library was constructed by Dr. Paul Keim and Dr. Virginia Coryell."

BASE COUNT	142 a	77 c	129 g	129 t	1 others
ORIGIN					
Query Match	13.2%;	Score 177.2;	DB 9;	Length 478;	
Best Local Similarity	62.2%;	Pred. No. 3.8e-39;			
Matches 278;	Conservative 0;	Mismatches 169;	Indels 0;	Gaps 0;	
QY	562	agtgggtgctctgattcgtggcaataaaactgttcgtcgcaaacgctggagactctcgtg	621		
Db	7	AGGTGTGGCTGTCTGTCGGAGGAACAACACTTGTGTGCTAATGCTGGAGATTCTAGATG	66		
QY	622	cataatgtctcgacgtggcgaggctgttaaactctctcgattgatcacaaacccaacccatga	681		
Db	67	TGCTTTATCAAGGAAGGCCAGGCCACAAATTTGTCCAAGGACCACAAACCTGAATTGA	126		
QY	682	gcattgagaggaaggtatagagagtctgaggcttcgtcccatggtggtggttaacgg	741		
Db	127	GGCTGAGAAAGACAGGATCTTAAAGCTGGTGGTTTCATCCAAGTTGGACGGGTCAATGG	186		
QY	742	tagtctaaatcttacaagagcaataggggacatggaattcaagggtgcacctgattgcc	801		







GenCore version 4.5  
Copyright (c) 1993 - 2000 CompuGen Ltd.

OM nucleic - nucleic search, using sw model

Run on: June 19, 2002, 18:42:44 ; Search time 53.31 Seconds  
(without alignments)  
6201.889 Million cell updates/sec

Title: US-09-828-302-9  
Perfect score: 1346  
Sequence: 1 gcgatcgatttgaagg.....ccttctgcttcgatcg 1346

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 383533 seqs, 122816752 residues

Total number of hits satisfying chosen parameters: 767066

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued Patents NA.\*  
1: /cgn2\_6/ptodata/1/ina/5A\_COMB.seq:\*  
2: /cgn2\_6/ptodata/1/ina/5B\_COMB.seq:\*  
3: /cgn2\_6/ptodata/1/ina/6A\_COMB.seq:\*  
4: /cgn2\_6/ptodata/1/ina/6B\_COMB.seq:\*  
5: /cgn2\_6/ptodata/1/ina/PCTUS\_COMB.seq:\*  
6: /cgn2\_6/ptodata/1/ina/backfiles1.seq:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description
1	127.8	9.5	1890	3 US-08-935-855-19	Sequence 19, Appl
2	120	8.9	1824	2 US-08-822-701-1	Sequence 1, Appli
3	120	8.9	1824	3 US-08-935-855-1	Sequence 1, Appli
4	120	8.9	2081	3 US-08-935-855-21	Sequence 21, Appl
5	99.6	7.4	2268	2 US-08-873-093-2	Sequence 2, Appli
6	55.8	4.1	7218	1 US-08-232-463-14	Sequence 14, Appl
7	50.2	3.7	1403	3 US-09-013-881-10	Sequence 10, Appl
8	36.4	2.7	2750	3 US-08-617-860B-33	Sequence 33, Appl
9	35	2.6	289	4 US-09-007-005-17	Sequence 17, Appl
10	35	2.6	289	4 US-09-244-796-17	Sequence 17, Appl
11	33.6	2.5	12047	2 US-09-022-461-1	Sequence 1, Appli
12	32.8	2.4	2277	1 US-08-676-967-2	Sequence 2, Appli
13	32.8	2.4	2277	1 US-08-676-974-2	Sequence 2, Appli
14	32.8	2.4	2277	2 US-09-098-487-2	Sequence 2, Appli
15	32	2.4	1498	1 US-08-118-469A-1	Sequence 1, Appli
16	32	2.4	1498	1 US-08-909-119-1	Sequence 1, Appli
17	32	2.4	3186	1 US-07-688-352C-23	Sequence 23, Appl
18	32	2.4	3186	2 US-08-474-379C-23	Sequence 23, Appl
19	32	2.4	3186	3 US-09-146-249A-23	Sequence 23, Appl
20	32	2.4	3186	3 US-08-206-188B-23	Sequence 23, Appl
21	32	2.4	3186	5 PCT-US91-02714-22	Sequence 22, Appl
22	32	2.4	3890	2 US-08-942-521B-1	Sequence 1, Appli
23	32	2.4	3890	3 US-09-192-702-1	Sequence 1, Appli
24	32	2.4	3890	4 US-08-445-474-1	Sequence 1, Appli
25	32	2.4	3890	5 PCT-US94-02612-1	Sequence 1, Appli
26	32	2.4	4068	2 US-08-474-379C-58	Sequence 58, Appl
27	32	2.4	4068	3 US-09-146-249A-58	Sequence 58, Appl

28	32	2.4	4068	3 US-08-206-188B-58	Sequence 58, Appl
29	31.8	2.4	3918	4 US-08-936-165A-243	Sequence 243, App
c 30	31.8	2.4	8959	1 US-08-920-812-1	Sequence 1, Appli
c 31	31.8	2.4	8959	1 US-08-920-827-1	Sequence 1, Appli
c 32	31.8	2.4	8959	1 US-08-921-177-1	Sequence 1, Appli
c 33	31.8	2.4	8959	1 US-08-362-577C-1	Sequence 1, Appli
c 34	31.8	2.4	8959	2 US-08-920-828-1	Sequence 1, Appli
35	31.6	2.3	3635	2 US-08-553-436A-5	Sequence 5, Appli
36	31.4	2.3	3539	4 US-08-853-948B-1	Sequence 1, Appli
37	31.4	2.3	8920	2 US-08-446-855A-1	Sequence 1, Appli
38	31.4	2.3	8920	4 US-09-150-741-1	Sequence 1, Appli
c 39	31.2	2.3	867	2 US-08-466-103A-5	Sequence 5, Appli
40	30.8	2.3	1988	1 US-08-469-202-26	Sequence 26, Appl
41	30.8	2.3	1988	2 US-08-484-434C-33	Sequence 33, Appl
42	30.8	2.3	2000	1 US-08-469-202-25	Sequence 25, Appl
43	30.8	2.3	2000	2 US-08-484-434C-32	Sequence 32, Appl
c 44	30.4	2.3	312	4 US-09-191-852-20	Sequence 20, Appl
c 45	30.4	2.3	312	5 PCT-US95-13376-20	Sequence 20, Appl

ALIGNMENTS

RESULT 1  
US-08-935-855-19  
; Sequence 19, Application US/08935855  
; Patent No. 6066485  
; GENERAL INFORMATION:  
; APPLICANT: Guthridge, Mark  
; APPLICANT: Basilio, Claudio  
; TITLE OF INVENTION: NOVEL GROWTH FACTOR INDUCIBLE  
; TITLE OF INVENTION: SERINE/THREONINE PHOSPHATASE, FIN13  
; NUMBER OF SEQUENCES: 22  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: David A. Jackson, Esq.  
; STREET: 411 Hackensack Ave, Continental Plaza, 4th  
; STREET: Floor  
; CITY: Hackensack  
; STATE: New Jersey  
; COUNTRY: USA  
; ZIP: 07601  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/935,855  
; FILING DATE:  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Jackson Esq., David A.  
; REGISTRATION NUMBER: 26,742  
; REFERENCE/DOCKET NUMBER: 1049-1-002 CIP  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 201-487-5800  
; TELEFAX: 201-343-1684  
; INFORMATION FOR SEQ ID NO: 19:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1890 base pairs  
; TYPE: nucleic acid  
; STRANDEDNESS: double  
; TOPOLOGY: linear  
; MOLECULE TYPE: cDNA  
; HYPOTHETICAL: NO  
; ORIGINAL SOURCE:  
; ORGANISM: Homo sapiens  
US-08-935-855-19

Query Match 9.5%; Score 127.8; DB 3; Length 1890;  
Best Local Similarity 59.5%; Pred. No. 1.4e-31;  
Matches 235; Conservative 0; Mismatches 157; Indels 3; Gaps 1;



```
;
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
;
US-08-935-855-1

Query Match      8.9%; Score 120; DB 3; Length 1824;
Best Local Similarity 57.2%; Pred. No. 4.8e-29;
Matches 238; Conservative 0; Mismatches 175; Indels 3; Gaps 1;

QY 529 agatttccagggtcccatattatggggagtactgcagtggtggtctctgattcgtggcaataa 588
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 714 AGAAGAGCCTGTTCTGACAGTGGCACAACAGCGGTGGTGGCTCTGATCAGAGGGAAGCA 773

QY 589 actgttcgtcgcaaacgctggagactctgcgtgcataatgtctcgacgtggcgaggtgtg 648
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 774 GTTGATTGTGGCCAATGCAGGAGACTCTCGCTGTGTGGTGTCCGAGGCTGGCAAAGCTTT 833

QY 649 aaatctctcgattgatcacaaaccccaacctagagcatgagagggaaaaaggatagagtg 708
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 834 AGATATGTCTATGACCACAAAACCCAGAGGATGAAGTGGAGCTGGCAGGCATCAAGAATGC 893

QY 709 tggaggc---ttcgtccatggtggtcgtgttaacggtagttctaaatcttacaaagagcaat 765
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 894 TGGTGGCAAGGTCAACATGGATGGACGAGTCAATGGAGGCTCAACCTCTCCAGGGCCAT 953

QY 766 aggggacatggaattcaagggtcgacctgattggccacctgacaaagcaagtagtgacctg 825
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 954 TGGAGACCACCTTCTACAAGAGAGAAACAAAAAATTTGCCACCCAGGAACAGATGATTTCTGC 1013

QY 826 ctgtcccgatgttgctgaagttgaccttggacctggacccggggatgaatttatcgtgctggccctg 885
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 1014 CCTCCTGACATCAAGGTGCTGACTCTCACTGATGACCATGAATTCATGGTCATTGCTTG 1073

QY 886 tgatggaatatgggatgttatgtctagtcaagctgtcgtggacttcgttataatacaa 941
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 1074 TGACGGCATCTGGAATGTGATGAGCAGCCAGGAGGTTGTAGACTTTATTCAATCAA 1129

RESULT 4
US-08-935-855-21
; Sequence 21, Application US/089335855
; Patent No. 6066485
; GENERAL INFORMATION:
; APPLICANT: Guthridge, Mark
; APPLICANT: Basilio, Claudio
; TITLE OF INVENTION: NOVEL GROWTH FACTOR INDUCIBLE
; TITLE OF INVENTION: SERINE/THREONINE PHOSPHATASE, FIN13
; NUMBER OF SEQUENCES: 22
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: David A. Jackson, Esq.
; STREET: 411 Hackensack Ave, Continental Plaza, 4th
; STREET: Floor
; CITY: Hackensack
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07601
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/935,855
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Jackson Esq., David A.
; REGISTRATION NUMBER: 26,742
; REFERENCE/DOCKET NUMBER: 1049-1-002 CIP
```

```
;
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 201-487-5800
; TELEFAX: 201-343-1684
; INFORMATION FOR SEQ ID NO: 21:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2081 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ORIGINAL SOURCE:
; ORGANISM: Mus musculus
;
US-08-935-855-21

Query Match      8.9%; Score 120; DB 3; Length 2081;
Best Local Similarity 57.2%; Pred. No. 5.2e-29;
Matches 238; Conservative 0; Mismatches 175; Indels 3; Gaps 1;

QY 529 agatttccagggtcccatattatggggagtactgcagtggtggtctctgattcgtggcaataa 588
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 971 AGAAGAGCCTGTTCTTGACAGTGGCACAACAGCGGTGGTGGCTCTGATCAGAGGGAAGCA 1030

QY 589 actgttcgtcgcaaacgctggagactctgcgtgcataatgtctcgacgtggcgaggtgtg 648
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 1031 GTTGATTGTGGCCAATGCAGGAGACTCTCGCTGTGTGGTGTCCGAGGCTGGCAAAGCTTT 1090

QY 649 aaatctctcgattgatcacaaaccccaacctagagcatgagagggaaaaaggatagagtg 708
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 1091 AGATATGTCTATGACCACAAAACCCAGAGGATGAAGTGGAGCTGGCAGGCATCAAGAATGC 1150

QY 709 tggaggc---ttcgtccatggtggtcgtgttaacggtagttctaaatcttacaaagagcaat 765
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 1151 TGGTGGCAAGGTCAACATGGATGGACGAGTCAATGGAGGCTCAACCTCTCCAGGGCCAT 1210

QY 766 aggggacatggaattcaagggtcgacctgattggccacctgacaaagcaagtagtgacctg 825
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 1211 TGGAGACCACCTTCTACAAGAGAAACAAAAAATTTGCCACCCAGGAACAGATGATTTCTGC 1270

QY 826 ctgtcccgatgttgctgaagttgaccttggacccggggatgaatttatcgtgctggccctg 885
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 1271 CCTTCTGACATCAAGGTGCTGACTCTCACTGATGACCATGAATTCATGGTCATTGCTTG 1330

QY 886 tgatggaatatgggatgttatgtctagtcaagctgtcgtggacttcgttataatacaa 941
    ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| | ||| |
Db 1331 TGACGGCATCTGGAATGTGATGAGCAGCCAGGAGGTTGTAGACTTTATTCAATCAA 1386

RESULT 5
US-08-873-093-2
; Sequence 2, Application US/08873093
; Patent No. 5853997
; GENERAL INFORMATION:
; APPLICANT: Bandman, Olga
; APPLICANT: Goli, Surya K.
; APPLICANT: Lal, Preeti
; APPLICANT: Corley, Neil C.
; APPLICANT: Zhang, Hong
; TITLE OF INVENTION: NEW PROTEIN PHOSPHATASE
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Incyte Pharmaceuticals, Inc.
; STREET: 3174 Porter Drive
; CITY: Palo Alto
; STATE: CA
; COUNTRY: USA
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ for Windows Version 2.0
```













QY 396 gtagtcagcttgataaaactcggtaataaggaaatagctcctctaatacgagggaggatgacy 455  
          :| | | : | | | | | : : : : | : : : | : : : |  
Db 806 ARMGNCNGTNAARMGNCNGCNCNGCNCNAAARWSNWSNGAYCAYWSNGARGARGAYWSNG 865  
QY 456 aaagtgattattcctctatgctgt 477  
          | | | : | : | : |  
Db 866 AYYTNGARGARWSNGAYWSNAT 887

RESULT 14  
US-09-098-487-2  
; Sequence 2, Application US/09098487  
; Patent No. 5917025  
; GENERAL INFORMATION:  
; APPLICANT: COLLINS, Kathleen  
; TITLE OF INVENTION: Human Telomerase  
; NUMBER OF SEQUENCES: 11  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Science & Technology Law Group  
; STREET: 268 Bush Street, Suite 3200  
; CITY: San Francisco  
; STATE: CA  
; COUNTRY: USA  
; ZIP: 94104  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/098.487  
; FILING DATE:  
; CLASSIFICATION:  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Osman Ph.D., Richard A  
; REGISTRATION NUMBER: 36,627  
; REFERENCE/DOCKET NUMBER: UCB96-055  
; TELEPHONE: (415)343-4341  
; TELEFAX: (415)343-4342  
; INFORMATION FOR SEQ ID NO: 2:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 2277 base pairs  
; TYPE: nucleic acid  
; STRANDEDNESS: double  
; TOPOLOGY: linear  
; MOLECULE TYPE: cDNA  
US-09-098-487-2

Query Match 2.4%; Score 32.8; DB 2; Length 2277;  
Best Local Similarity 26.3%; Pred. No. 1.7;  
Matches 69; Conservative 53; Mismatches 140; Indels 0; Gaps 0;

QY 216 gtcacggaggtaaatgggtggcaaaattttgtgcaaagcacttacaccaagaggttctga 275  
          :| | | : | | : | : : | : : : | : | : | : | : |  
Db 626 SNCAYGARWSNAARCAYCARGARWSNGTNAARAARAAGGNMGNGARGARGAYATGG 685  
QY 276 agtctgaagcgtacgctaagggtgacttaaaagcaagtttgaatatctctttttacgga 335  
          | : | | : | | : | | : | : : | : : : | : | : |  
Db 686 ARGARGARGARAAYGAYGAYGAYGAYGAYGAYGARGARGAYGGTNTTYGAYG 745  
QY 336 tggatgagatgatgaaggaggagcaagtgggtggaaaagagcttcaaaagtttggagggaacaa 395  
          | | | : : | | : | : : | : : : | : | : | : : |  
Db 746 AYGARGAYGARGARGARGARAAYATHGARWSNAARGTNACNAARCCNGTNCARATHCARA 805  
QY 396 gtagtcagcttgataaaactcggtaataatggaataatagctcctctaatacgaggaggatgacg 455  
          :| | | : | | : | | : | : : : | : : : : | : | : |  
Db 806 ARMGNCNGTNAARMGNCNCNGCNCNAAARWSNWSNGAYCAYWSNGARGARGAYWSNG 865  
QY 456 aaagtgattattcctctatgctgt 477  
          | | | | : : | : |

Db 866 AYYTNGARGARWSNGAYWSNAT 887  
RESULT 15  
US-08-118-469A-1/c  
; Sequence 1, Application US/08118469A  
; Patent No. 5656451  
; GENERAL INFORMATION:  
; APPLICANT: Flavell, Richard A.  
; APPLICANT: Fikrig, Erol  
; APPLICANT: Lam, Tuan T.  
; APPLICANT: Kantor, Fred S.  
; APPLICANT: Barthold, Stephen W.  
; TITLE OF INVENTION: NOVEL B. BURGENDORFERI POLYPEPTIDES  
; NUMBER OF SEQUENCES: 11  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: c/o FISH & NEAVE  
; STREET: 1251 Avenue of the Americas  
; CITY: New York  
; STATE: New York  
; COUNTRY: U.S.A.  
; ZIP: 10022  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/118,469A  
; FILING DATE: 08-SEP-1993  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 08/099,757  
; FILING DATE: 30-JUL-1993  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Haley Jr., James F.  
; REGISTRATION NUMBER: 27,794  
; REFERENCE/DOCKET NUMBER: YU-102CIP  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (212) 596-9000  
; TELEFAX: (212) 596-9090  
; INFORMATION FOR SEQ ID NO: 1:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1498 base pairs  
; TYPE: nucleic acid  
; STRANDEDNESS: double  
; TOPOLOGY: linear  
; MOLECULE TYPE: DNA (genomic)  
; HYPOTHETICAL: NO  
; ANTI-SENSE: NO  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: 129..644  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: 672..1364  
US-08-118-469A-1

Query Match 2.4%; Score 32; DB 1; Length 1498;  
Best Local Similarity 60.2%; Pred. No. 2.5;  
Matches 53; Conservative 0; Mismatches 35; Indels 0; Gaps 0;

QY 1147 ttcaacttctgaggttcaaagttccttctgttagacttcttctgtcacttctacaccta 1206  
          | | | | | | | | | | | | | | | | | | | | | |  
Db 145 TTCATTTTCTTATTCATAAGTTACTCCATAAGTCCTAATCTTACCACATAATAATAAT 86  
QY 1207 ttcgaattttcaaaaagactttaataaaa 1234  
          | | | | | | | | | | | | | | | | | | | | | |  
Db 85 TGCAATTTTCAAAGATTTAATAATATA 58

Search completed: June 19, 2002, 19:49:52  
Job time: 4028 sec

---



GenCore version 4.5  
Copyright (c) 1993 - 2000 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: June 19, 2002, 18:43:49 ; Search time 210.22 Seconds  
(without alignments)  
10993.087 Million cell updates/sec

Title: US-09-828-302-9  
Perfect score: 1346  
Sequence: 1 gcgatatcgatttgcaagg.....ccttgccttcgatatgc 1346

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 1736436 seqs, 858457221 residues

Total number of hits satisfying chosen parameters: 3472872

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : N\_Geneseq\_032802:\*  
1: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:\*  
2: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:\*  
3: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:\*  
4: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:\*  
5: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:\*  
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:\*  
7: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1986.DAT:\*  
8: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:\*  
9: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:\*  
10: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:\*  
11: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1990.DAT:\*  
12: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1991.DAT:\*  
13: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1992.DAT:\*  
14: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:\*  
15: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1994.DAT:\*  
16: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:\*  
17: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1996.DAT:\*  
18: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1997.DAT:\*  
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1998.DAT:\*  
20: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:\*  
21: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:\*  
22: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001A.DAT:\*  
23: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:\*  
24: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2002.DAT:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	324.4	24.1	1224	21 AAC47492	Arabidopsis thalia
2	302	22.4	1460	21 AAC47731	Arabidopsis thalia
3	290	21.5	1458	21 AAC35563	Arabidopsis thalia
4	203.8	15.1	1206	21 AAC51886	Arabidopsis thalia
5	203.8	15.1	1409	21 AAC52147	Arabidopsis thalia
6	183.4	13.6	787	21 AAC34272	Arabidopsis thalia
7	155.6	11.6	467	21 AAC46684	Zea mays DNA fragm
8	155	11.5	449	21 AAC46725	Zea mays DNA fragm
9	146	10.8	1824	22 AAH26935	Trichoderma reesei

10	146	10.8	1824	24	AAD24598	Trichoderma reesei
11	141.2	10.5	929	21	AAC44093	Zea mays DNA fragm
12	127.8	9.5	1641	19	AAV66512	Human MP-19 full 1
13	124.6	9.3	2268	23	ABL05227	Drosophila melanog
14	120	8.9	1824	18	AAT91793	FIN13 serine/threo
15	114.2	8.5	4504	23	ABL05226	Drosophila melanog
16	111.4	8.3	493	21	AAC43557	Zea mays DNA fragm
17	103.2	7.7	1203	23	ABL04905	Drosophila melanog
18	103.2	7.7	3255	23	ABL04904	Drosophila melanog
19	99.6	7.4	2270	20	AAX05715	Human protein phos
20	99.2	7.4	2543	21	AAF15879	Human prostate can
21	99.2	7.4	2543	21	AAZ97065	Human secreted pro
22	97.8	7.3	1395	20	AAI15662	Protein phosphatas
23	94.2	7.0	1707	23	ABL02369	Drosophila melanog
24	93.2	6.9	14684	23	ABL02368	Drosophila melanog
25	89	6.6	1249	23	ABL03433	Drosophila melanog
26	89	6.6	1304	23	ABL19259	Drosophila melanog
27	87	6.5	14169	22	AAK72936	Human immune/haema
28	84.4	6.3	1407	20	AAI15658	Protein phosphatas
29	81.6	6.1	1104	23	ABL10405	Drosophila melanog
30	81.6	6.1	3104	23	ABL10404	Drosophila melanog
31	81.4	6.0	1489	21	AAC41197	Arabidopsis thalia
32	81.4	6.0	1564	21	AAC45481	Arabidopsis thalia
33	80.6	6.0	552	20	AAI39627	Breast cancer asso
34	79.6	5.9	1387	24	ABI99319	Mouse ischaemic co
35	79.6	5.9	1387	24	AAI17162	Mouse magnesium-de
36	78	5.8	1573	24	ABL01567	Human nervous syst
37	78	5.8	6271	22	ABA15878	Human reproductive
38	78	5.8	6271	22	AAI04938	Human immune/haema
39	78	5.8	6271	22	AAK85395	Human protein phos
40	76.2	5.7	1164	24	ABA94427	Lambda SL9-1 clone
41	73.8	5.5	2580	18	AAT62454	Aspergillus oryzae
42	72.4	5.4	642	21	AAI11992	DNA encoding novel
43	72	5.3	613	23	AAI88046	Human MP-19 partia
44	71.2	5.3	678	19	AAV66511	Cat flea hindgut a
45	70.2	5.2	549	21	AAC93805	

ALIGNMENTS

RESULT 1  
AAC47492  
ID AAC47492 standard; DNA; 1224 BP.  
XX  
AC AAC47492;  
XX  
DT 18-OCT-2000 (first entry)  
XX  
DE Arabidopsis thaliana DNA fragment SEQ ID NO: 54018.  
XX  
KW Hybridisation assay; genetic mapping; gene expression control;  
KW protein identification; signal transduction pathway;  
KW metabolic pathway; promoter; termination sequence; ss.  
XX  
OS Arabidopsis thaliana.  
XX  
PN EPI033405-A2.  
XX  
PD 06-SEP-2000.  
XX  
PF 25-FEB-2000; 2000EP-0301439.  
XX  
PR 25-FEB-1999; 99US-0121825.  
PR 05-MAR-1999; 99US-0123180.  
PR 09-MAR-1999; 99US-0123548.  
PR 23-MAR-1999; 99US-0125788.  
PR 25-MAR-1999; 99US-0126264.  
PR 29-MAR-1999; 99US-0126785.  
PR 01-APR-1999; 99US-0127462.  
PR 06-APR-1999; 99US-0128234.  
PR 08-APR-1999; 99US-0128714.  
PR 16-APR-1999; 99US-0129845.



PR 19-APR-1999; 99US-0130077.  
PR 21-APR-1999; 99US-0130449.  
PR 23-APR-1999; 99US-0130510.  
PR 23-APR-1999; 99US-0130891.  
PR 28-APR-1999; 99US-0131449.  
PR 30-APR-1999; 99US-0132048.  
PR 30-APR-1999; 99US-0132407.  
PR 04-MAY-1999; 99US-0132484.  
PR 05-MAY-1999; 99US-0132485.  
PR 06-MAY-1999; 99US-0132486.  
PR 06-MAY-1999; 99US-0132487.  
PR 07-MAY-1999; 99US-0132863.  
PR 11-MAY-1999; 99US-0134256.  
PR 14-MAY-1999; 99US-0134218.  
PR 14-MAY-1999; 99US-0134219.  
PR 14-MAY-1999; 99US-0134221.  
PR 14-MAY-1999; 99US-0134370.  
PR 18-MAY-1999; 99US-0134768.  
PR 19-MAY-1999; 99US-0134941.  
PR 20-MAY-1999; 99US-0135124.  
PR 21-MAY-1999; 99US-0135353.  
PR 24-MAY-1999; 99US-0135629.  
PR 25-MAY-1999; 99US-0136021.  
PR 27-MAY-1999; 99US-0136392.  
PR 28-MAY-1999; 99US-0136782.  
PR 01-JUN-1999; 99US-0137222.  
PR 03-JUN-1999; 99US-0137528.  
PR 04-JUN-1999; 99US-0137502.  
PR 07-JUN-1999; 99US-0137724.  
PR 08-JUN-1999; 99US-0138094.  
PR 10-JUN-1999; 99US-0138540.  
PR 10-JUN-1999; 99US-0138847.  
PR 14-JUN-1999; 99US-0139119.  
PR 16-JUN-1999; 99US-0139452.  
PR 16-JUN-1999; 99US-0139453.  
PR 17-JUN-1999; 99US-0139492.  
PR 18-JUN-1999; 99US-0139454.  
PR 18-JUN-1999; 99US-0139455.  
PR 18-JUN-1999; 99US-0139456.  
PR 18-JUN-1999; 99US-0139457.  
PR 18-JUN-1999; 99US-0139458.  
PR 18-JUN-1999; 99US-0139459.  
PR 18-JUN-1999; 99US-0139460.  
PR 18-JUN-1999; 99US-0139461.  
PR 18-JUN-1999; 99US-0139462.  
PR 18-JUN-1999; 99US-0139463.  
PR 18-JUN-1999; 99US-0139750.  
PR 18-JUN-1999; 99US-0139763.  
PR 21-JUN-1999; 99US-0139817.  
PR 22-JUN-1999; 99US-0139899.  
PR 23-JUN-1999; 99US-0140353.  
PR 23-JUN-1999; 99US-0140354.  
PR 24-JUN-1999; 99US-0140695.  
PR 28-JUN-1999; 99US-0140823.  
PR 29-JUN-1999; 99US-0140991.  
PR 30-JUN-1999; 99US-0141287.  
PR 01-JUL-1999; 99US-0141842.  
PR 01-JUL-1999; 99US-0142154.  
PR 02-JUL-1999; 99US-0142055.  
PR 06-JUL-1999; 99US-0142390.  
PR 08-JUL-1999; 99US-0142803.  
PR 09-JUL-1999; 99US-0142920.  
PR 12-JUL-1999; 99US-0142977.  
PR 13-JUL-1999; 99US-0143542.  
PR 14-JUL-1999; 99US-0143624.  
PR 15-JUL-1999; 99US-0144005.  
PR 16-JUL-1999; 99US-0144085.  
PR 16-JUL-1999; 99US-0144086.  
PR 19-JUL-1999; 99US-0144325.  
PR 19-JUL-1999; 99US-0144331.  
PR 19-JUL-1999; 99US-0144332.  
PR 19-JUL-1999; 99US-0144333.  
PR 19-JUL-1999; 99US-0144334.

PR 19-JUL-1999; 99US-0144335.  
PR 20-JUL-1999; 99US-0144352.  
PR 20-JUL-1999; 99US-0144632.  
PR 20-JUL-1999; 99US-0144884.  
PR 21-JUL-1999; 99US-0144814.  
PR 21-JUL-1999; 99US-0145086.  
PR 21-JUL-1999; 99US-0145088.  
PR 22-JUL-1999; 99US-0145085.  
PR 22-JUL-1999; 99US-0145087.  
PR 22-JUL-1999; 99US-0145089.  
PR 22-JUL-1999; 99US-0145192.  
PR 23-JUL-1999; 99US-0145145.  
PR 23-JUL-1999; 99US-0145218.  
PR 23-JUL-1999; 99US-0145224.  
PR 26-JUL-1999; 99US-0145276.  
PR 27-JUL-1999; 99US-0145913.  
PR 27-JUL-1999; 99US-0145918.  
PR 27-JUL-1999; 99US-0145919.  
PR 28-JUL-1999; 99US-0145951.  
PR 02-AUG-1999; 99US-0146386.  
PR 02-AUG-1999; 99US-0146388.  
PR 02-AUG-1999; 99US-0146389.  
PR 03-AUG-1999; 99US-0147038.  
PR 04-AUG-1999; 99US-0147204.  
PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.  
PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 25-AUG-1999; 99US-0150566.  
PR 26-AUG-1999; 99US-0150884.  
PR 27-AUG-1999; 99US-0151065.  
PR 27-AUG-1999; 99US-0151066.  
PR 27-AUG-1999; 99US-0151080.  
PR 30-AUG-1999; 99US-0151303.  
PR 31-AUG-1999; 99US-0151438.  
PR 01-SEP-1999; 99US-0151930.  
PR 07-SEP-1999; 99US-0152363.  
PR 10-SEP-1999; 99US-0153070.  
PR 13-SEP-1999; 99US-0153758.  
PR 15-SEP-1999; 99US-0154018.  
PR 16-SEP-1999; 99US-0154039.  
PR 20-SEP-1999; 99US-0154779.  
PR 22-SEP-1999; 99US-0155139.  
PR 23-SEP-1999; 99US-0155486.  
PR 24-SEP-1999; 99US-0155659.  
PR 28-SEP-1999; 99US-0156458.  
PR 29-SEP-1999; 99US-0156596.  
PR 04-OCT-1999; 99US-0157117.  
PR 05-OCT-1999; 99US-0157753.  
PR 06-OCT-1999; 99US-0157865.  
PR 07-OCT-1999; 99US-0158029.  
PR 08-OCT-1999; 99US-0158232.  
PR 12-OCT-1999; 99US-0158369.  
PR 13-OCT-1999; 99US-0159293.  
PR 13-OCT-1999; 99US-0159294.  
PR 13-OCT-1999; 99US-0159295.  
PR 14-OCT-1999; 99US-0159329.



PR	14-OCT-1999;	99US-0159330.
PR	14-OCT-1999;	99US-0159331.
PR	14-OCT-1999;	99US-0159637.
PR	14-OCT-1999;	99US-0159638.
PR	18-OCT-1999;	99US-0159584.
PR	21-OCT-1999;	99US-0160741.
PR	21-OCT-1999;	99US-0160767.
PR	21-OCT-1999;	99US-0160768.
PR	21-OCT-1999;	99US-0160770.
PR	21-OCT-1999;	99US-0160814.
PR	21-OCT-1999;	99US-0160815.
PR	22-OCT-1999;	99US-0160980.
PR	22-OCT-1999;	99US-0160981.
PR	22-OCT-1999;	99US-0160989.
PR	25-OCT-1999;	99US-0161404.
PR	25-OCT-1999;	99US-0161405.
PR	25-OCT-1999;	99US-0161406.
PR	26-OCT-1999;	99US-0161359.
PR	26-OCT-1999;	99US-0161360.
PR	26-OCT-1999;	99US-0161361.
PR	28-OCT-1999;	99US-0161920.
PR	28-OCT-1999;	99US-0161992.
PR	28-OCT-1999;	99US-0161993.
PR	29-OCT-1999;	99US-0162142.
Query Match 24.1%; Score 324.4; DB 21; Length 1224;		
Best Local Similarity 59.2%; Pred. No. 3.4e-91;		
Matches 612; Conservative 0; Mismatches 386; Indels 36; Gaps 2;		
QY	32	agagggatgggaatttatcttctctcctcaaaagactgacaagacatccgaagatgatgag 91
Db	145	agagagatgggtatatatactaaagtactccaaaacagacaagttctcagaagatggcgaa 204
QY	92	aatgccgagttacgctatggttttatcagccatgcaagggtggcgcgatatgagatggaggat 151
Db	205	aatcataaactcagatatggtttatcctctctatgcaaggttggcgtgcgtccatggaagat 264
QY	152	gcacacaaagctatctttaaacgttgataagaacacgctcaacatcaatatattggcatcttt 211
Db	265	gctcatgctgcaatacttgatctcgatgataac-----acttccttcttgggtgtctat 318
QY	212	gatggtcacggaggtataattggtggcaaaaattttgtcaaaagcacttacaccaagaggtt 271
Db	319	gatggtcatggaggtaaaagtgtttcttaagtctctgccaagtctctacaccagcaggtt 378
QY	272	ctgaagctcgaagcgtacgcctaaaggctgacttaaaagcaagtttggaaatatctccttttta 331
Db	379	cttagtgatgagcgcgtatgcagctggagacgtaggagcttctctctcaaaaagcatttttc 438
QY	332	cggatggatgagatgatgaaggagcaagtggtggtaaaagagcttcaaaagtttggaggaa 391
Db	439	agaatggatgagatgatgcaaaggacaaaagaggtggcgagagtttagcagtagcttggtgac 498
QY	392	acaagtagtcagcttgataaaactcggtaaatggaataagctcctctaatagcgagggaggat 451
Db	499	aaaatcaataaagttcagtgggatgattgaagggttataatggtcacccaagaagtggggac 558
QY	452	gacgaaagtgattattcctatgctgtgctaaactgaaagcaaatgatagtaacttggccact 511
Db	559	-----agtgctaataaacctgatgcttggcggttt 588
QY	512	aaaaagcataaataattcagatttccaggggtcccatattatgggagtagtgcagtggtggct 571
Db	589	gaggaaggtcctcatcttctgattttgctggacctaatcttgggagcagcgcatgctagct 648
QY	572	ctgattcgtggcaataaaactgttcgtcgcaaacgctgagagactctcgtgcataaatgtct 631
Db	649	gtgttagagacaagcagctatttgttgcaaatgcagtgactcacgttgtgtgatatcc 708
QY	632	cgacgtggcgaggctgtaaatctctcgtattgatcacaaacccaacctaagcagcatgagagg 691
Db	709	agaaagaatcaggccttataatcttctctagatcacaaaccagatcttgaagctgagaaa 768

QY	692	aaaagtagagagagtctgtaggcttcgtccatggtggtcggtttaacggtagctctaaaat 751
Db	769	gaaaggatattgaaagctggtgcttttatacatgcagggcgagtcaatggaaagttaaat 828
QY	752	cttacaagagcaaatagggacatggaattcaaggggtcgacctgatttggcacctgacaag 811
Db	829	ctatcacgagctatcggtgacatggaattcaagcagaataagtttttgccatctgaaaaag 888
QY	812	caagtagtgacgtgctgtcccgatgttgcgaagtgcgaagttagccttggacccggggatgaattt 871
Db	889	caaatagttaccgctagtcacagatgtaaacactgttgaaactctgtgatgatgatgatttc 948
QY	872	atcgtgtggcctgtgatggaatatgggatgttatgtctagtcaagctgtcgtggacttc 931
Db	949	cttgtcttgcctgcgatggaatttgggattgcatgacaagccaacaactcgttgatttc 1008
QY	932	gttaaatcaagattaccttaccaccaaaaaactctatcatcttctgtgtgaggagatactggat 991
Db	1009	atacatgaacaattgaatttcagagaccaaactctcgttgggtatgtgaaaaagtctcgtat 1068
QY	992	tactgtctgtccccaaccacccgccagcaagaaggatgtgataacatgagcatcattata 1051
Db	1069	agatgtctggctccaaacacttcaggtggtgaaggcttgataacatgaccatgatattg 1128
QY	1052	gtccaaccaaaagca 1065
Db	1129	gttcgattcaagaa 1142
RESULT 2		
AAC47731		
ID	AAC47731	standard; DNA; 1460 BP.
XX		
AC	AAC47731;	
XX		
DT	18-OCT-2000	(first entry)
XX		
DE	Arabidopsis thaliana	DNA fragment SEQ ID NO: 54907.
XX		
KW	Hybridisation assay; genetic mapping; gene expression control;	
KW	protein identification; signal transduction pathway;	
KW	metabolic pathway; promoter; termination sequence; ss.	
XX		
OS	Arabidopsis thaliana.	
XX		
PN	EP1033405-A2.	
XX		
PD	06-SEP-2000.	
XX		
PF	25-FEB-2000; 2000EP-0301439.	
XX		
PR	25-FEB-1999;	99US-0121825.
PR	05-MAR-1999;	99US-0123180.
PR	09-MAR-1999;	99US-0123548.
PR	23-MAR-1999;	99US-0125788.
PR	25-MAR-1999;	99US-0126264.
PR	29-MAR-1999;	99US-0126785.
PR	01-APR-1999;	99US-0127462.
PR	06-APR-1999;	99US-0128234.
PR	08-APR-1999;	99US-0128714.
PR	16-APR-1999;	99US-0129845.
PR	19-APR-1999;	99US-0130077.
PR	21-APR-1999;	99US-0130449.
PR	23-APR-1999;	99US-0130510.
PR	23-APR-1999;	99US-0130891.
PR	28-APR-1999;	99US-0131449.
PR	30-APR-1999;	99US-0132048.
PR	30-APR-1999;	99US-0132407.
PR	04-MAY-1999;	99US-0132484.
PR	05-MAY-1999;	99US-0132485.
PR	06-MAY-1999;	99US-0132486.
PR	06-MAY-1999;	99US-0132487.
PR	07-MAY-1999;	99US-0132863.

PR 11-MAY-1999; 99US-0134256.  
PR 14-MAY-1999; 99US-0134218.  
PR 14-MAY-1999; 99US-0134219.  
PR 14-MAY-1999; 99US-0134221.  
PR 14-MAY-1999; 99US-0134370.  
PR 18-MAY-1999; 99US-0134768.  
PR 19-MAY-1999; 99US-0134941.  
PR 20-MAY-1999; 99US-0135124.  
PR 21-MAY-1999; 99US-0135353.  
PR 24-MAY-1999; 99US-0135629.  
PR 25-MAY-1999; 99US-0136021.  
PR 27-MAY-1999; 99US-0136392.  
PR 28-MAY-1999; 99US-0136782.  
PR 01-JUN-1999; 99US-0137222.  
PR 03-JUN-1999; 99US-0137528.  
PR 04-JUN-1999; 99US-0137502.  
PR 07-JUN-1999; 99US-0137724.  
PR 08-JUN-1999; 99US-0138094.  
PR 10-JUN-1999; 99US-0138540.  
PR 10-JUN-1999; 99US-0138847.  
PR 14-JUN-1999; 99US-0139119.  
PR 16-JUN-1999; 99US-0139452.  
PR 16-JUN-1999; 99US-0139453.  
PR 17-JUN-1999; 99US-0139492.  
PR 18-JUN-1999; 99US-0139454.  
PR 18-JUN-1999; 99US-0139455.  
PR 18-JUN-1999; 99US-0139456.  
PR 18-JUN-1999; 99US-0139457.  
PR 18-JUN-1999; 99US-0139458.  
PR 18-JUN-1999; 99US-0139459.  
PR 18-JUN-1999; 99US-0139460.  
PR 18-JUN-1999; 99US-0139461.  
PR 18-JUN-1999; 99US-0139462.  
PR 18-JUN-1999; 99US-0139463.  
PR 18-JUN-1999; 99US-0139750.  
PR 18-JUN-1999; 99US-0139763.  
PR 21-JUN-1999; 99US-0139817.  
PR 22-JUN-1999; 99US-0139899.  
PR 23-JUN-1999; 99US-0140353.  
PR 23-JUN-1999; 99US-0140354.  
PR 24-JUN-1999; 99US-0140695.  
PR 28-JUN-1999; 99US-0140823.  
PR 29-JUN-1999; 99US-0140991.  
PR 30-JUN-1999; 99US-0141287.  
PR 01-JUL-1999; 99US-0141842.  
PR 01-JUL-1999; 99US-0142154.  
PR 02-JUL-1999; 99US-0142055.  
PR 06-JUL-1999; 99US-0142390.  
PR 08-JUL-1999; 99US-0142803.  
PR 09-JUL-1999; 99US-0142920.  
PR 12-JUL-1999; 99US-0142977.  
PR 13-JUL-1999; 99US-0143542.  
PR 14-JUL-1999; 99US-0143624.  
PR 15-JUL-1999; 99US-0144005.  
PR 16-JUL-1999; 99US-0144085.  
PR 16-JUL-1999; 99US-0144086.  
PR 19-JUL-1999; 99US-0144325.  
PR 19-JUL-1999; 99US-0144331.  
PR 19-JUL-1999; 99US-0144332.  
PR 19-JUL-1999; 99US-0144333.  
PR 19-JUL-1999; 99US-0144334.  
PR 19-JUL-1999; 99US-0144335.  
PR 20-JUL-1999; 99US-0144352.  
PR 20-JUL-1999; 99US-0144632.  
PR 20-JUL-1999; 99US-0144884.  
PR 21-JUL-1999; 99US-0144814.  
PR 21-JUL-1999; 99US-0145086.  
PR 21-JUL-1999; 99US-0145088.  
PR 22-JUL-1999; 99US-0145085.  
PR 22-JUL-1999; 99US-0145087.  
PR 22-JUL-1999; 99US-0145089.  
PR 22-JUL-1999; 99US-0145192.  
PR 23-JUL-1999; 99US-0145145.

PR 23-JUL-1999; 99US-0145218.  
PR 23-JUL-1999; 99US-0145224.  
PR 26-JUL-1999; 99US-0145276.  
PR 27-JUL-1999; 99US-0145913.  
PR 27-JUL-1999; 99US-0145918.  
PR 27-JUL-1999; 99US-0145919.  
PR 28-JUL-1999; 99US-0145951.  
PR 02-AUG-1999; 99US-0146386.  
PR 02-AUG-1999; 99US-0146388.  
PR 02-AUG-1999; 99US-0146389.  
PR 03-AUG-1999; 99US-0147038.  
PR 04-AUG-1999; 99US-0147204.  
PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.  
PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 23-AUG-1999; 99US-0149930.  
PR 25-AUG-1999; 99US-0150566.  
PR 26-AUG-1999; 99US-0150884.  
PR 27-AUG-1999; 99US-0151065.  
PR 27-AUG-1999; 99US-0151066.  
PR 27-AUG-1999; 99US-0151080.  
PR 30-AUG-1999; 99US-0151303.  
PR 31-AUG-1999; 99US-0151438.  
PR 01-SEP-1999; 99US-0151930.  
PR 07-SEP-1999; 99US-0152363.  
PR 10-SEP-1999; 99US-0153070.  
PR 13-SEP-1999; 99US-0153758.  
PR 15-SEP-1999; 99US-0154018.  
PR 16-SEP-1999; 99US-0154039.  
PR 20-SEP-1999; 99US-0154779.  
PR 22-SEP-1999; 99US-0155139.  
PR 23-SEP-1999; 99US-0155486.  
PR 24-SEP-1999; 99US-0155659.  
PR 28-SEP-1999; 99US-0156458.  
PR 29-SEP-1999; 99US-0156596.  
PR 04-OCT-1999; 99US-0157117.  
PR 05-OCT-1999; 99US-0157753.  
PR 06-OCT-1999; 99US-0157865.  
PR 07-OCT-1999; 99US-0158029.  
PR 08-OCT-1999; 99US-0158232.  
PR 12-OCT-1999; 99US-0158369.  
PR 13-OCT-1999; 99US-0159293.  
PR 13-OCT-1999; 99US-0159295.  
PR 14-OCT-1999; 99US-0159329.  
PR 14-OCT-1999; 99US-0159330.  
PR 14-OCT-1999; 99US-0159331.  
PR 14-OCT-1999; 99US-0159637.  
PR 14-OCT-1999; 99US-0159638.  
PR 18-OCT-1999; 99US-0159584.  
PR 21-OCT-1999; 99US-0160741.  
PR 21-OCT-1999; 99US-0160767.  
PR 21-OCT-1999; 99US-0160768.  
PR 21-OCT-1999; 99US-0160770.  
PR 21-OCT-1999; 99US-0160814.  
PR 21-OCT-1999; 99US-0160815.  
PR 22-OCT-1999; 99US-0160980.

PR	22-OCT-1999;	99US-0160981.	
PR	22-OCT-1999;	99US-0160989.	
PR	25-OCT-1999;	99US-0161404.	
PR	25-OCT-1999;	99US-0161405.	
PR	25-OCT-1999;	99US-0161406.	
PR	26-OCT-1999;	99US-0161359.	
PR	26-OCT-1999;	99US-0161360.	
PR	26-OCT-1999;	99US-0161361.	
PR	28-OCT-1999;	99US-0161920.	
PR	28-OCT-1999;	99US-0161992.	
PR	28-OCT-1999;	99US-0161993.	
PR	29-OCT-1999;	99US-0162142.	
Query Match 22.4%; Score 302; DB 21; Length 1460;			
Best Local Similarity 57.8%; Pred. No. 4.1e-84;			
Matches 598; Conservative 0; Mismatches 400; Indels 36; Gaps 2;			
QY	32	agagggatgggaatttatcttctgtctctccaaagactgacaagacatccgaagatgatgag	91
Db	165	atatcgatgggtacatacctaaagtctccgaaaactgaaaagttaacagaagatggtgag	224
QY	92	aatgcgcaggttacgctatggttttatcagcccatgcaagggtggcgcgataggaggat	151
Db	225	aatgataagctcagatttggtttatcgtctatcgatcaagggtggcgcgtaccatggaagac	284
QY	152	gcacaaaagctatctttaacggttgataaagaacacgtcaacatcaatatattggcatcttt	211
Db	285	gcgcagtctgcaattcttgatcttgatgataa-----gacatcgttcttcggtgtgat	338
QY	212	gatggtcacggaggtaaatggttgccaaaattttgtgcaaacgacttacaccaagaggtt	271
Db	339	gatggccatggaggtaaagtcgttgcaaaagtctctgtgccaaagtatctacaccagcaggt	398
QY	272	ctgaagctggaagcgtacgtctaaaggtgacttaaaagcaagtttggaaatatctctttta	331
Db	399	atcagtaatgaagcgtataaaaactggagacgtcgaaacatctcttcgaagacattcttt	458
QY	332	cggatgatgatgatgaagggagcaagtggtgggtggaaagagcttcaagtttggaggaa	391
Db	459	agaatggatgacatgatgcaaggacaaaaggaggtggcgcgagattagctgtacttggcgac	518
QY	392	acaagtagtcagcttgataaaactcggtaagtggaaatagctcctctaatacgcaggaggat	451
Db	519	aagatgaacaaaatttagcggcatgattgaaggatttatatggtcaccaagaacggtga-	577
QY	452	gacgaaagtgattattcctatgctgtgctaactgaaagcaatgatagtaacttggccact	511
Db	578	-----caccaataaccaacccgatatgttggcctctt	608
QY	512	aaaagcataaaatttcagatttccagggtcccatattatgggagtagctgcagtggtgct	571
Db	609	gaegatggtcctcattcttgatttccagggacctaactcctcgggtgcacagcgtgtgtagct	668
QY	572	ctgattcgtggcaataaaactgttcgtcgcgaacgctggagactctcgtgcataaatgtct	631
Db	669	cttattaaagataaagaagctcttctgttgcaaatgccggtgactcacgttgtgtgatata	728
QY	632	cgacgtggcgcgaggctgtaaatctctcgtattgatcacaaacccaacctagagcatgagag	691
Db	729	agaaagagtcaggccttaacaatctttctaaagatcacaaagcctgatcttgaagttgaaaa	788
QY	692	aaaaggatagagagtgctggaggcttcgtccatggttggttggttaacggtagtctaaaat	751
Db	789	gaaaggatattgaaaagcttggttggtctttattcacgctgggagaatcaatggaagcttgaat	848
QY	752	cttaacaagacaataggggacatggaattcaagggttcgacctgatatttgcacctgacaag	811
Db	849	ctgacaagagccattggtgatatatggagttcaaggacagaataaagtttttaccatctgaaaag	908
QY	812	caagtagtgacgtgcttcccgatgttgtcgaaagttgaccttggaccgggggatgaattt	871
Db	909	caaatggttactgctgatccagatataaacactatttgacctatgtgatgatgacttt	968

QY	872	atcgtgctggccctgtgatggaaatatgggatgttggttatgtctagtcgaagctgtcgtggacttc	931
Db	969	cttgtgtgtcgttcgcatggaatatgggattgtatgtcaagccaggaactagttgatttt	1028
QY	932	gttaaatcaagattacctaccaccaccacccaccccgccagcaagaaggatgtgtgagagatactg	991
Db	1029	atccatgaacagtttaaatctgaacacaaaacttcaacagtatgtgaaaaaggttgttgat	1088
QY	992	tactgcttgtccccaaccaccaccccgccagcaagaaggatgtgataaacatgagcatcattata	1051
Db	1089	agatgtttggtccagatacacgcgactggtgaaggttgtgataaatatgaccatcatcttg	1148
QY	1052	gtccaacaccaaagca	1065
Db	1149	gttcagttcaagaa	1162
RESULT 3			
AAC35563			
ID	AAC35563 standard; DNA; 1458 BP.		
XX	AAC35563;		
AC	AAC35563;		
XX	17-OCT-2000 (first entry)		
DT	Arabidopsis thaliana DNA fragment SEQ ID NO: 10636.		
XX	Hybridisation assay; genetic mapping; gene expression control;		
DE	protein identification; signal transduction pathway;		
XX	metabolic pathway; promoter; termination sequence; ss.		
KW	Arabidopsis thaliana.		
KW	EP1033405-A2.		
XX	06-SEP-2000.		
PD	25-FEB-2000; 2000EP-0301439.		
XX	25-FEB-1999; 99US-0121825.		
PR	05-MAR-1999; 99US-0123180.		
PR	09-MAR-1999; 99US-0123548.		
PR	23-MAR-1999; 99US-0125788.		
PR	25-MAR-1999; 99US-0126264.		
PR	29-MAR-1999; 99US-0126785.		
PR	01-APR-1999; 99US-0127462.		
PR	06-APR-1999; 99US-0128234.		
PR	08-APR-1999; 99US-0128714.		
PR	16-APR-1999; 99US-0129845.		
PR	19-APR-1999; 99US-0130077.		
PR	21-APR-1999; 99US-0130449.		
PR	23-APR-1999; 99US-0130510.		
PR	23-APR-1999; 99US-0130891.		
PR	28-APR-1999; 99US-0131449.		
PR	30-APR-1999; 99US-0132048.		
PR	30-APR-1999; 99US-0132407.		
PR	04-MAY-1999; 99US-0132484.		
PR	05-MAY-1999; 99US-0132485.		
PR	06-MAY-1999; 99US-0132486.		
PR	06-MAY-1999; 99US-0132487.		
PR	07-MAY-1999; 99US-0132863.		
PR	11-MAY-1999; 99US-0134256.		
PR	14-MAY-1999; 99US-0134218.		
PR	14-MAY-1999; 99US-0134219.		
PR	14-MAY-1999; 99US-0134221.		
PR	14-MAY-1999; 99US-0134370.		
PR	18-MAY-1999; 99US-0134768.		
PR	19-MAY-1999; 99US-0134941.		
PR	20-MAY-1999; 99US-0135124.		
PR	21-MAY-1999; 99US-0135353.		
PR	24-MAY-1999; 99US-0135629.		
PR	25-MAY-1999; 99US-0136021.		
PR	27-MAY-1999; 99US-0136392.		

PR 28-MAY-1999; 99US-0136782.  
PR 01-JUN-1999; 99US-0137222.  
PR 03-JUN-1999; 99US-0137528.  
PR 04-JUN-1999; 99US-0137502.  
PR 07-JUN-1999; 99US-0137724.  
PR 08-JUN-1999; 99US-0138094.  
PR 10-JUN-1999; 99US-0138540.  
PR 10-JUN-1999; 99US-0138847.  
PR 14-JUN-1999; 99US-0139119.  
PR 16-JUN-1999; 99US-0139452.  
PR 16-JUN-1999; 99US-0139453.  
PR 17-JUN-1999; 99US-0139492.  
PR 18-JUN-1999; 99US-0139454.  
PR 18-JUN-1999; 99US-0139455.  
PR 18-JUN-1999; 99US-0139456.  
PR 18-JUN-1999; 99US-0139457.  
PR 18-JUN-1999; 99US-0139458.  
PR 18-JUN-1999; 99US-0139459.  
PR 18-JUN-1999; 99US-0139460.  
PR 18-JUN-1999; 99US-0139461.  
PR 18-JUN-1999; 99US-0139462.  
PR 18-JUN-1999; 99US-0139463.  
PR 18-JUN-1999; 99US-0139750.  
PR 18-JUN-1999; 99US-0139763.  
PR 21-JUN-1999; 99US-0139817.  
PR 22-JUN-1999; 99US-0139899.  
PR 23-JUN-1999; 99US-0140353.  
PR 23-JUN-1999; 99US-0140354.  
PR 24-JUN-1999; 99US-0140695.  
PR 28-JUN-1999; 99US-0140823.  
PR 29-JUN-1999; 99US-0140991.  
PR 30-JUN-1999; 99US-0141287.  
PR 01-JUL-1999; 99US-0141842.  
PR 01-JUL-1999; 99US-0142154.  
PR 02-JUL-1999; 99US-0142055.  
PR 06-JUL-1999; 99US-0142390.  
PR 08-JUL-1999; 99US-0142803.  
PR 09-JUL-1999; 99US-0142920.  
PR 12-JUL-1999; 99US-0142977.  
PR 13-JUL-1999; 99US-0143542.  
PR 14-JUL-1999; 99US-0143624.  
PR 15-JUL-1999; 99US-0144005.  
PR 16-JUL-1999; 99US-0144085.  
PR 16-JUL-1999; 99US-0144086.  
PR 19-JUL-1999; 99US-0144325.  
PR 19-JUL-1999; 99US-0144331.  
PR 19-JUL-1999; 99US-0144332.  
PR 19-JUL-1999; 99US-0144333.  
PR 19-JUL-1999; 99US-0144334.  
PR 19-JUL-1999; 99US-0144335.  
PR 20-JUL-1999; 99US-0144352.  
PR 20-JUL-1999; 99US-0144632.  
PR 20-JUL-1999; 99US-0144884.  
PR 21-JUL-1999; 99US-0144814.  
PR 21-JUL-1999; 99US-0145086.  
PR 21-JUL-1999; 99US-0145088.  
PR 22-JUL-1999; 99US-0145085.  
PR 22-JUL-1999; 99US-0145087.  
PR 22-JUL-1999; 99US-0145089.  
PR 22-JUL-1999; 99US-0145192.  
PR 23-JUL-1999; 99US-0145145.  
PR 23-JUL-1999; 99US-0145218.  
PR 23-JUL-1999; 99US-0145224.  
PR 26-JUL-1999; 99US-0145276.  
PR 27-JUL-1999; 99US-0145913.  
PR 27-JUL-1999; 99US-0145918.  
PR 27-JUL-1999; 99US-0145919.  
PR 28-JUL-1999; 99US-0145951.  
PR 02-AUG-1999; 99US-0146386.  
PR 02-AUG-1999; 99US-0146388.  
PR 02-AUG-1999; 99US-0146389.  
PR 03-AUG-1999; 99US-0147038.  
PR 04-AUG-1999; 99US-0147204.

PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.  
PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 23-AUG-1999; 99US-0149930.  
PR 25-AUG-1999; 99US-0150566.  
PR 26-AUG-1999; 99US-0150884.  
PR 27-AUG-1999; 99US-0151065.  
PR 27-AUG-1999; 99US-0151066.  
PR 27-AUG-1999; 99US-0151080.  
PR 30-AUG-1999; 99US-0151303.  
PR 31-AUG-1999; 99US-0151438.  
PR 01-SEP-1999; 99US-0151930.  
PR 07-SEP-1999; 99US-0152363.  
PR 10-SEP-1999; 99US-0153070.  
PR 13-SEP-1999; 99US-0153758.  
PR 15-SEP-1999; 99US-0154018.  
PR 16-SEP-1999; 99US-0154039.  
PR 20-SEP-1999; 99US-0154779.  
PR 22-SEP-1999; 99US-0155139.  
PR 23-SEP-1999; 99US-0155486.  
PR 24-SEP-1999; 99US-0155659.  
PR 28-SEP-1999; 99US-0156458.  
PR 29-SEP-1999; 99US-0156596.  
PR 04-OCT-1999; 99US-0157117.  
PR 05-OCT-1999; 99US-0157753.  
PR 06-OCT-1999; 99US-0157865.  
PR 07-OCT-1999; 99US-0158029.  
PR 08-OCT-1999; 99US-0158232.  
PR 12-OCT-1999; 99US-0158369.  
PR 13-OCT-1999; 99US-0159293.  
PR 13-OCT-1999; 99US-0159294.  
PR 13-OCT-1999; 99US-0159295.  
PR 14-OCT-1999; 99US-0159329.  
PR 14-OCT-1999; 99US-0159330.  
PR 14-OCT-1999; 99US-0159331.  
PR 14-OCT-1999; 99US-0159637.  
PR 14-OCT-1999; 99US-0159638.  
PR 18-OCT-1999; 99US-0159584.  
PR 21-OCT-1999; 99US-0160741.  
PR 21-OCT-1999; 99US-0160767.  
PR 21-OCT-1999; 99US-0160768.  
PR 21-OCT-1999; 99US-0160770.  
PR 21-OCT-1999; 99US-0160814.  
PR 21-OCT-1999; 99US-0160815.  
PR 22-OCT-1999; 99US-0160980.  
PR 22-OCT-1999; 99US-0160981.  
PR 22-OCT-1999; 99US-0160989.  
PR 25-OCT-1999; 99US-0161404.  
PR 25-OCT-1999; 99US-0161405.  
PR 25-OCT-1999; 99US-0161406.  
PR 26-OCT-1999; 99US-0161359.  
PR 26-OCT-1999; 99US-0161360.  
PR 26-OCT-1999; 99US-0161361.  
PR 28-OCT-1999; 99US-0161920.  
PR 28-OCT-1999; 99US-0161992.  
PR 28-OCT-1999; 99US-0161993.  
PR 29-OCT-1999; 99US-0162142.

Query Match		21.5%;	Score 290;	DB 21;	Length 1458;
Best Local Similarity		57.2%;	Pred. NO. 2.4e-80;		
Matches 591;		Conservative 0;	Mismatches 405;	Indels 38;	Gaps 2;
QY	32	agagggatgggaatttatcttctgctctccaaagacgtgacaagacatccgaagatgatgag	91		
Db	167	atatcgatgggtacatacctaagtctccgaaaacgaaaagttatcagaagatggtgag	226		
QY	92	aatgcgaggttacgctatggtttatcagccatgcaagggtggcgcgatagcatggaggat	151		
Db	227	aatgataagctcagatttggtttatcgtctatgcaaggttggcgcgtaccatggaagac	286		
QY	152	gcacacaagctatcttaaacggttgataaagaacacgctcaacatcaatatattggcatcttt	211		
Db	287	gcgcagtctgcaattcttgatcttgatgataagacatc-----gttcttcggtgtgt	338		
QY	212	gatgtcacggaggtaaatgggtggcaaaaattttgtgcaaaagcacttacaccaagaggtt	271		
Db	339	atgagccatggaggtaaaagtcggttgcaaaagttctgtgccaaagtatctacaccagcaggtt	398		
QY	272	ctgaagctctgaagcgtacgctaaagggtgactttaaaagcaagttttggaatatattccctttta	331		
Db	399	atcagtaaatgaagcgtataaaaactggagacgtgcgaacatctcttcgagagcatcttt	458		
QY	332	cggatggatgagatgatgaaggggagcaagtggtgggaaaagagcttcaaaagtttgaggaa	391		
Db	459	agaatggatgacatgatgcgaaggacaaaagaggtggcgagagttagctgtacttggcgac	518		
QY	392	acaagtagtcagcttgataaaactcggtaaatggaaatagctcctctaataatcgagggaggt	451		
Db	519	aagatgaacaaaatttagcgcgatgattgaaggatttatatggtcaccaagaacggtga-	577		
QY	452	gacgaaagtgattattctctatgctgtgctaaactgaaagcaatgatagtaacttggccact	511		
Db	578	-----caccataaaccaaccgcgatagttggcctctt	608		
QY	512	aaaaagcataaaatttcagatttccaggggtcccatttatgggagtagctcagtggtggct	571		
Db	609	gaagatggtccctcattctctgatttcacgggacacctcctcgggtgcacacgctgtgtagct	668		
QY	572	ctgattcgtggcaataaaactgttcgtcgcgaacgctggagactctcgtgcataaatgtct	631		
Db	669	cttattaaagataaagaagctcttctgtgcaaatgccggtgactcacgttgtgtgatca	728		
QY	632	cgacgtggcgaggctgtaaatctctcgtatgtgatcacaaaacccaacctagagcatgaggg	691		
Db	729	agaaagagtcaggcttaacaatcttcttaaaagatcacaaacctgatcttgaagtgaaaa	788		
QY	692	aaaaggatagagatgctggaggcttcgtccatggtggtcgtgttaacggtagtctaagt	751		
Db	789	gaaaggatattgaaagctgtggcttatttcacgctgggagaatcaatggaagcttgaat	848		
QY	752	cttacaaagcaaataggggacatggaaattcaagggtcgacctgatttgcaccctgacaag	811		
Db	849	ctgacaagagccattggtgatattggagttcaagcagaataaagtttttaccatctgaaaag	908		
QY	812	caagtagtgacgtgctgtcccgatggttgcgaagttgaccttggaccggggatgaattt	871		
Db	909	caaatggttactgctgatccagatataaacactattgacctatgtgtgatgatgacttt	968		
QY	872	atcgtgctggcctgtgatggaatatgggatgttatgtctagtcaagctgtcgtggacttc	931		
Db	969	cttggtgtgtcgttcgatggaatatgggattgtatgtcgaagccaggaaactagttgat	1028		
QY	932	gttaaatcaagattacctaccaccaaaaaactctatcatcttttgtgtgaggagatactggat	991		
Db	1029	atccatgaacaggttaaaatctgaaacaaaaactttcaacagtatgtgaaaaggttgttgat	1088		
QY	992	tactgcttgtcccccaccaccgccagcaagaaggtatgtgataacatgagcatcattata	1051		
Db	1089	agatgttttggtccagacacacagcgactggtgaaggttgtgataaatatgaccatcatctg	1148		

QY	1052	gtccaaccaaagca	1065	
Db	1149	gttcagttcaagaa	1162	
RESULT 4				
AAC51886				
ID	AAC51886 standard; DNA; 1206 BP.			
XX				
AC	AAC51886;			
XX				
DT	18-OCT-2000 (first entry)			
XX				
DE	Arabidopsis thaliana DNA fragment SEQ ID NO: 69950.			
XX				
KW	Hybridisation assay; genetic mapping; gene expression control;			
KW	protein identification; signal transduction pathway;			
KW	metabolic pathway; promoter; termination sequence; ss.			
XX				
OS	Arabidopsis thaliana.			
XX				
PN	EP1033405-A2.			
XX				
PD	06-SEP-2000.			
XX				
PF	25-FEB-2000; 2000EP-0301439.			
XX				
PR	25-FEB-1999;	99US-0121825.		
PR	05-MAR-1999;	99US-0123180.		
PR	09-MAR-1999;	99US-0123548.		
PR	23-MAR-1999;	99US-0125788.		
PR	25-MAR-1999;	99US-0126264.		
PR	29-MAR-1999;	99US-0126785.		
PR	01-APR-1999;	99US-0127462.		
PR	06-APR-1999;	99US-0128234.		
PR	08-APR-1999;	99US-0128714.		
PR	16-APR-1999;	99US-0129845.		
PR	19-APR-1999;	99US-0130077.		
PR	21-APR-1999;	99US-0130449.		
PR	23-APR-1999;	99US-0130510.		
PR	23-APR-1999;	99US-0130891.		
PR	28-APR-1999;	99US-0131449.		
PR	30-APR-1999;	99US-0132048.		
PR	30-APR-1999;	99US-0132407.		
PR	04-MAY-1999;	99US-0132484.		
PR	05-MAY-1999;	99US-0132485.		
PR	06-MAY-1999;	99US-0132486.		
PR	06-MAY-1999;	99US-0132487.		
PR	07-MAY-1999;	99US-0132863.		
PR	11-MAY-1999;	99US-0134256.		
PR	14-MAY-1999;	99US-0134218.		
PR	14-MAY-1999;	99US-0134219.		
PR	14-MAY-1999;	99US-0134221.		
PR	14-MAY-1999;	99US-0134370.		
PR	18-MAY-1999;	99US-0134768.		
PR	19-MAY-1999;	99US-0134941.		
PR	20-MAY-1999;	99US-0135124.		
PR	21-MAY-1999;	99US-0135353.		
PR	24-MAY-1999;	99US-0135629.		
PR	25-MAY-1999;	99US-0136021.		
PR	27-MAY-1999;	99US-0136392.		
PR	28-MAY-1999;	99US-0136782.		
PR	01-JUN-1999;	99US-0137222.		
PR	03-JUN-1999;	99US-0137528.		
PR	04-JUN-1999;	99US-0137502.		
PR	07-JUN-1999;	99US-0137724.		
PR	08-JUN-1999;	99US-0138094.		
PR	10-JUN-1999;	99US-0138540.		
PR	10-JUN-1999;	99US-0138847.		
PR	14-JUN-1999;	99US-0139119.		
PR	16-JUN-1999;	99US-0139452.		
PR	16-JUN-1999;	99US-0139453.		
PR	17-JUN-1999;	99US-0139492.		



PR 18-JUN-1999; 99US-0139454.  
PR 18-JUN-1999; 99US-0139455.  
PR 18-JUN-1999; 99US-0139456.  
PR 18-JUN-1999; 99US-0139457.  
PR 18-JUN-1999; 99US-0139458.  
PR 18-JUN-1999; 99US-0139459.  
PR 18-JUN-1999; 99US-0139460.  
PR 18-JUN-1999; 99US-0139461.  
PR 18-JUN-1999; 99US-0139462.  
PR 18-JUN-1999; 99US-0139463.  
PR 18-JUN-1999; 99US-0139750.  
PR 18-JUN-1999; 99US-0139763.  
PR 21-JUN-1999; 99US-0139817.  
PR 22-JUN-1999; 99US-0139899.  
PR 23-JUN-1999; 99US-0140353.  
PR 23-JUN-1999; 99US-0140354.  
PR 24-JUN-1999; 99US-0140695.  
PR 28-JUN-1999; 99US-0140823.  
PR 29-JUN-1999; 99US-0140991.  
PR 30-JUN-1999; 99US-0141287.  
PR 01-JUL-1999; 99US-0141842.  
PR 01-JUL-1999; 99US-0142154.  
PR 02-JUL-1999; 99US-0142055.  
PR 06-JUL-1999; 99US-0142390.  
PR 08-JUL-1999; 99US-0142803.  
PR 09-JUL-1999; 99US-0142920.  
PR 12-JUL-1999; 99US-0142977.  
PR 13-JUL-1999; 99US-0143542.  
PR 14-JUL-1999; 99US-0143624.  
PR 15-JUL-1999; 99US-0144005.  
PR 16-JUL-1999; 99US-0144085.  
PR 16-JUL-1999; 99US-0144086.  
PR 19-JUL-1999; 99US-0144325.  
PR 19-JUL-1999; 99US-0144331.  
PR 19-JUL-1999; 99US-0144332.  
PR 19-JUL-1999; 99US-0144333.  
PR 19-JUL-1999; 99US-0144334.  
PR 19-JUL-1999; 99US-0144335.  
PR 20-JUL-1999; 99US-0144352.  
PR 20-JUL-1999; 99US-0144632.  
PR 20-JUL-1999; 99US-0144884.  
PR 21-JUL-1999; 99US-0144814.  
PR 21-JUL-1999; 99US-0145086.  
PR 21-JUL-1999; 99US-0145088.  
PR 22-JUL-1999; 99US-0145085.  
PR 22-JUL-1999; 99US-0145087.  
PR 22-JUL-1999; 99US-0145089.  
PR 22-JUL-1999; 99US-0145192.  
PR 23-JUL-1999; 99US-0145145.  
PR 23-JUL-1999; 99US-0145218.  
PR 23-JUL-1999; 99US-0145224.  
PR 26-JUL-1999; 99US-0145276.  
PR 27-JUL-1999; 99US-0145913.  
PR 27-JUL-1999; 99US-0145918.  
PR 27-JUL-1999; 99US-0145919.  
PR 28-JUL-1999; 99US-0145951.  
PR 02-AUG-1999; 99US-0146386.  
PR 02-AUG-1999; 99US-0146388.  
PR 02-AUG-1999; 99US-0146389.  
PR 03-AUG-1999; 99US-0147038.  
PR 04-AUG-1999; 99US-0147204.  
PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.

PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 23-AUG-1999; 99US-0149930.  
PR 25-AUG-1999; 99US-0150566.  
PR 26-AUG-1999; 99US-0150884.  
PR 27-AUG-1999; 99US-0151065.  
PR 27-AUG-1999; 99US-0151066.  
PR 27-AUG-1999; 99US-0151080.  
PR 30-AUG-1999; 99US-0151103.  
PR 31-AUG-1999; 99US-0151438.  
PR 01-SEP-1999; 99US-0151930.  
PR 07-SEP-1999; 99US-0152363.  
PR 10-SEP-1999; 99US-0153070.  
PR 13-SEP-1999; 99US-0153758.  
PR 15-SEP-1999; 99US-0154018.  
PR 16-SEP-1999; 99US-0154039.  
PR 20-SEP-1999; 99US-0154779.  
PR 22-SEP-1999; 99US-0155139.  
PR 23-SEP-1999; 99US-0155486.  
PR 24-SEP-1999; 99US-0155659.  
PR 28-SEP-1999; 99US-0156458.  
PR 29-SEP-1999; 99US-0156596.  
PR 04-OCT-1999; 99US-0157117.  
PR 05-OCT-1999; 99US-0157753.  
PR 06-OCT-1999; 99US-0157865.  
PR 07-OCT-1999; 99US-0158029.  
PR 08-OCT-1999; 99US-0158232.  
PR 12-OCT-1999; 99US-0158369.  
PR 13-OCT-1999; 99US-0159293.  
PR 13-OCT-1999; 99US-0159294.  
PR 14-OCT-1999; 99US-0159329.  
PR 14-OCT-1999; 99US-0159330.  
PR 14-OCT-1999; 99US-0159331.  
PR 14-OCT-1999; 99US-0159637.  
PR 14-OCT-1999; 99US-0159638.  
PR 18-OCT-1999; 99US-0159584.  
PR 21-OCT-1999; 99US-0160741.  
PR 21-OCT-1999; 99US-0160767.  
PR 21-OCT-1999; 99US-0160768.  
PR 21-OCT-1999; 99US-0160770.  
PR 21-OCT-1999; 99US-0160814.  
PR 21-OCT-1999; 99US-0160815.  
PR 22-OCT-1999; 99US-0160980.  
PR 22-OCT-1999; 99US-0160981.  
PR 22-OCT-1999; 99US-0160989.  
PR 25-OCT-1999; 99US-0161404.  
PR 25-OCT-1999; 99US-0161405.  
PR 25-OCT-1999; 99US-0161406.  
PR 26-OCT-1999; 99US-0161359.  
PR 26-OCT-1999; 99US-0161360.  
PR 26-OCT-1999; 99US-0161361.  
PR 28-OCT-1999; 99US-0161920.  
PR 28-OCT-1999; 99US-0161992.  
PR 28-OCT-1999; 99US-0161993.  
PR 29-OCT-1999; 99US-0162142.

Query Match 15.1%; Score 203.8; DB 21; Length 1206;  
Best Local Similarity 60.0%; Pred. No. 2.7e-53;  
Matches 340; Conservative 0; Mismatches 227; Indels 0; Gaps 0;

QY 499 taacttggccactaaaaagcataaataattccagatttccagggtccatttatgggagtac 558  
|| | | | | | | | | | | | | | | | | | | | |  
Db 344 tagttggcctcttgaagatggtcctcatcttgatttcacgggacacctcggggtgcac 403  
  
QY 559 tgcagtggtgctctgatttcgtggcaataaactgttcgtaaaactgttcgcaaacgctggagactctcg 618  
|| | | | | | | | | | | | | | | | | | | | |  
Db 404 agcgtgtgtagctctctattataagataagaagctcttctgttgcaaatgccggtgactcacg 463







KW Hybridisation assay; genetic mapping; gene expression control;  
KW protein identification; signal transduction pathway;  
KW metabolic pathway; promoter; termination sequence; ss.

OS Arabidopsis thaliana.

XX EP1033405-A2.

PN

XX

PD

XX

PF 25-FEB-2000; 2000EP-0301439.

XX

PR 25-FEB-1999; 99US-0121825.

PR 05-MAR-1999; 99US-0123180.

PR 09-MAR-1999; 99US-0123548.

PR 23-MAR-1999; 99US-0125788.

PR 25-MAR-1999; 99US-0126264.

PR 29-MAR-1999; 99US-0126785.

PR 01-APR-1999; 99US-0127462.

PR 06-APR-1999; 99US-0128234.

PR 08-APR-1999; 99US-0128714.

PR 16-APR-1999; 99US-0129845.

PR 19-APR-1999; 99US-0130077.

PR 21-APR-1999; 99US-0130449.

PR 23-APR-1999; 99US-0130510.

PR 28-APR-1999; 99US-0131449.

PR 30-APR-1999; 99US-0132048.

PR 04-MAY-1999; 99US-0132407.

PR 05-MAY-1999; 99US-0132485.

PR 06-MAY-1999; 99US-0132486.

PR 06-MAY-1999; 99US-0132487.

PR 07-MAY-1999; 99US-0132863.

PR 11-MAY-1999; 99US-0134256.

PR 14-MAY-1999; 99US-0134218.

PR 14-MAY-1999; 99US-0134219.

PR 14-MAY-1999; 99US-0134221.

PR 14-MAY-1999; 99US-0134370.

PR 18-MAY-1999; 99US-0134768.

PR 19-MAY-1999; 99US-0134941.

PR 20-MAY-1999; 99US-0135124.

PR 21-MAY-1999; 99US-0135353.

PR 24-MAY-1999; 99US-0135629.

PR 25-MAY-1999; 99US-0136021.

PR 27-MAY-1999; 99US-0136392.

PR 28-MAY-1999; 99US-0136782.

PR 01-JUN-1999; 99US-0137222.

PR 03-JUN-1999; 99US-0137528.

PR 04-JUN-1999; 99US-0137502.

PR 07-JUN-1999; 99US-0137724.

PR 08-JUN-1999; 99US-0138094.

PR 10-JUN-1999; 99US-0138540.

PR 10-JUN-1999; 99US-0138847.

PR 14-JUN-1999; 99US-0139119.

PR 16-JUN-1999; 99US-0139452.

PR 17-JUN-1999; 99US-0139492.

PR 18-JUN-1999; 99US-0139454.

PR 18-JUN-1999; 99US-0139455.

PR 18-JUN-1999; 99US-0139456.

PR 18-JUN-1999; 99US-0139457.

PR 18-JUN-1999; 99US-0139458.

PR 18-JUN-1999; 99US-0139459.

PR 18-JUN-1999; 99US-0139460.

PR 18-JUN-1999; 99US-0139461.

PR 18-JUN-1999; 99US-0139462.

PR 18-JUN-1999; 99US-0139463.

PR 18-JUN-1999; 99US-0139750.

PR 18-JUN-1999; 99US-0139763.

PR 21-JUN-1999; 99US-0139817.

PR 22-JUN-1999; 99US-0139899.

PR 23-JUN-1999; 99US-0140353.

PR 23-JUN-1999; 99US-0140354.  
PR 24-JUN-1999; 99US-0140695.  
PR 28-JUN-1999; 99US-0140823.  
PR 29-JUN-1999; 99US-0140991.  
PR 30-JUN-1999; 99US-0141287.  
PR 01-JUL-1999; 99US-0141842.  
PR 01-JUL-1999; 99US-0142154.  
PR 02-JUL-1999; 99US-0142055.  
PR 06-JUL-1999; 99US-0142390.  
PR 08-JUL-1999; 99US-0142803.  
PR 09-JUL-1999; 99US-0142920.  
PR 12-JUL-1999; 99US-0142977.  
PR 13-JUL-1999; 99US-0143542.  
PR 14-JUL-1999; 99US-0143624.  
PR 15-JUL-1999; 99US-0144005.  
PR 16-JUL-1999; 99US-0144085.  
PR 16-JUL-1999; 99US-0144086.  
PR 19-JUL-1999; 99US-0144325.  
PR 19-JUL-1999; 99US-0144331.  
PR 19-JUL-1999; 99US-0144332.  
PR 19-JUL-1999; 99US-0144333.  
PR 19-JUL-1999; 99US-0144334.  
PR 19-JUL-1999; 99US-0144335.  
PR 20-JUL-1999; 99US-0144352.  
PR 20-JUL-1999; 99US-0144632.  
PR 20-JUL-1999; 99US-0144884.  
PR 21-JUL-1999; 99US-0144814.  
PR 21-JUL-1999; 99US-0145086.  
PR 21-JUL-1999; 99US-0145088.  
PR 22-JUL-1999; 99US-0145087.  
PR 22-JUL-1999; 99US-0145089.  
PR 22-JUL-1999; 99US-0145192.  
PR 23-JUL-1999; 99US-0145145.  
PR 23-JUL-1999; 99US-0145218.  
PR 23-JUL-1999; 99US-0145224.  
PR 26-JUL-1999; 99US-0145276.  
PR 27-JUL-1999; 99US-0145913.  
PR 27-JUL-1999; 99US-0145918.  
PR 27-JUL-1999; 99US-0145919.  
PR 28-JUL-1999; 99US-0145951.  
PR 02-AUG-1999; 99US-0146386.  
PR 02-AUG-1999; 99US-0146388.  
PR 02-AUG-1999; 99US-0146389.  
PR 03-AUG-1999; 99US-0147038.  
PR 04-AUG-1999; 99US-0147204.  
PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.  
PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 23-AUG-1999; 99US-0149930.  
PR 25-AUG-1999; 99US-0150566.  
PR 26-AUG-1999; 99US-0150884.  
PR 27-AUG-1999; 99US-0151065.  
PR 27-AUG-1999; 99US-0151066.  
PR 27-AUG-1999; 99US-0151080.  
PR 30-AUG-1999; 99US-0151303.  
PR 31-AUG-1999; 99US-0151438.



PR 14-MAY-1999; 99US-0134219.  
PR 14-MAY-1999; 99US-0134221.  
PR 14-MAY-1999; 99US-0134370.  
PR 18-MAY-1999; 99US-0134768.  
PR 19-MAY-1999; 99US-0134941.  
PR 20-MAY-1999; 99US-0135124.  
PR 21-MAY-1999; 99US-0135353.  
PR 24-MAY-1999; 99US-0135629.  
PR 25-MAY-1999; 99US-0136021.  
PR 27-MAY-1999; 99US-0136392.  
PR 28-MAY-1999; 99US-0136782.  
PR 01-JUN-1999; 99US-0137222.  
PR 03-JUN-1999; 99US-0137528.  
PR 04-JUN-1999; 99US-0137502.  
PR 07-JUN-1999; 99US-0137724.  
PR 08-JUN-1999; 99US-0138094.  
PR 10-JUN-1999; 99US-0138540.  
PR 10-JUN-1999; 99US-0138847.  
PR 14-JUN-1999; 99US-0139119.  
PR 16-JUN-1999; 99US-0139452.  
PR 16-JUN-1999; 99US-0139453.  
PR 17-JUN-1999; 99US-0139492.  
PR 18-JUN-1999; 99US-0139454.  
PR 18-JUN-1999; 99US-0139455.  
PR 18-JUN-1999; 99US-0139456.  
PR 18-JUN-1999; 99US-0139457.  
PR 18-JUN-1999; 99US-0139458.  
PR 18-JUN-1999; 99US-0139459.  
PR 18-JUN-1999; 99US-0139460.  
PR 18-JUN-1999; 99US-0139461.  
PR 18-JUN-1999; 99US-0139462.  
PR 18-JUN-1999; 99US-0139463.  
PR 18-JUN-1999; 99US-0139750.  
PR 18-JUN-1999; 99US-0139763.  
PR 21-JUN-1999; 99US-0139817.  
PR 22-JUN-1999; 99US-0139899.  
PR 23-JUN-1999; 99US-0140353.  
PR 23-JUN-1999; 99US-0140354.  
PR 24-JUN-1999; 99US-0140695.  
PR 28-JUN-1999; 99US-0140823.  
PR 29-JUN-1999; 99US-0140991.  
PR 30-JUN-1999; 99US-0141287.  
PR 01-JUL-1999; 99US-0142154.  
PR 02-JUL-1999; 99US-0142055.  
PR 06-JUL-1999; 99US-0142390.  
PR 08-JUL-1999; 99US-0142803.  
PR 09-JUL-1999; 99US-0142920.  
PR 12-JUL-1999; 99US-0142977.  
PR 13-JUL-1999; 99US-0143542.  
PR 14-JUL-1999; 99US-0143624.  
PR 15-JUL-1999; 99US-0144005.  
PR 16-JUL-1999; 99US-0144085.  
PR 16-JUL-1999; 99US-0144086.  
PR 19-JUL-1999; 99US-0144325.  
PR 19-JUL-1999; 99US-0144331.  
PR 19-JUL-1999; 99US-0144332.  
PR 19-JUL-1999; 99US-0144333.  
PR 19-JUL-1999; 99US-0144334.  
PR 19-JUL-1999; 99US-0144335.  
PR 20-JUL-1999; 99US-0144352.  
PR 20-JUL-1999; 99US-0144632.  
PR 20-JUL-1999; 99US-0144884.  
PR 21-JUL-1999; 99US-0144814.  
PR 21-JUL-1999; 99US-0145086.  
PR 21-JUL-1999; 99US-0145088.  
PR 22-JUL-1999; 99US-0145085.  
PR 22-JUL-1999; 99US-0145087.  
PR 22-JUL-1999; 99US-0145089.  
PR 22-JUL-1999; 99US-0145192.  
PR 23-JUL-1999; 99US-0145145.  
PR 23-JUL-1999; 99US-0145218.  
PR 23-JUL-1999; 99US-0145224.

PR 26-JUL-1999; 99US-0145276.  
PR 27-JUL-1999; 99US-0145913.  
PR 27-JUL-1999; 99US-0145918.  
PR 27-JUL-1999; 99US-0145919.  
PR 28-JUL-1999; 99US-0145951.  
PR 02-AUG-1999; 99US-0146386.  
PR 02-AUG-1999; 99US-0146388.  
PR 02-AUG-1999; 99US-0146389.  
PR 03-AUG-1999; 99US-0147038.  
PR 04-AUG-1999; 99US-0147204.  
PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.  
PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 23-AUG-1999; 99US-0149930.  
PR 25-AUG-1999; 99US-0150566.  
PR 26-AUG-1999; 99US-0150884.  
PR 27-AUG-1999; 99US-0151065.  
PR 27-AUG-1999; 99US-0151066.  
PR 27-AUG-1999; 99US-0151080.  
PR 30-AUG-1999; 99US-0151303.  
PR 31-AUG-1999; 99US-0151438.  
PR 01-SEP-1999; 99US-0151930.  
PR 07-SEP-1999; 99US-0152363.  
PR 10-SEP-1999; 99US-0153070.  
PR 13-SEP-1999; 99US-0153758.  
PR 15-SEP-1999; 99US-0154018.  
PR 16-SEP-1999; 99US-0154039.  
PR 20-SEP-1999; 99US-0154779.  
PR 22-SEP-1999; 99US-0155139.  
PR 23-SEP-1999; 99US-0155486.  
PR 24-SEP-1999; 99US-0156559.  
PR 28-SEP-1999; 99US-0156458.  
PR 29-SEP-1999; 99US-0156596.  
PR 04-OCT-1999; 99US-0157117.  
PR 05-OCT-1999; 99US-0157753.  
PR 06-OCT-1999; 99US-0157865.  
PR 07-OCT-1999; 99US-0158029.  
PR 08-OCT-1999; 99US-0158232.  
PR 12-OCT-1999; 99US-0158369.  
PR 13-OCT-1999; 99US-0159293.  
PR 13-OCT-1999; 99US-0159294.  
PR 13-OCT-1999; 99US-0159295.  
PR 14-OCT-1999; 99US-0159329.  
PR 14-OCT-1999; 99US-0159330.  
PR 14-OCT-1999; 99US-0159331.  
PR 14-OCT-1999; 99US-0159637.  
PR 14-OCT-1999; 99US-0159638.  
PR 18-OCT-1999; 99US-0159584.  
PR 21-OCT-1999; 99US-0160741.  
PR 21-OCT-1999; 99US-0160767.  
PR 21-OCT-1999; 99US-0160768.  
PR 21-OCT-1999; 99US-0160770.  
PR 21-OCT-1999; 99US-0160814.  
PR 21-OCT-1999; 99US-0160815.  
PR 22-OCT-1999; 99US-0160980.  
PR 22-OCT-1999; 99US-0160981.  
PR 22-OCT-1999; 99US-0160989.



PR 16-JUL-1999; 99US-0144085.  
PR 16-JUL-1999; 99US-0144086.  
PR 19-JUL-1999; 99US-0144325.  
PR 19-JUL-1999; 99US-0144331.  
PR 19-JUL-1999; 99US-0144332.  
PR 19-JUL-1999; 99US-0144333.  
PR 19-JUL-1999; 99US-0144334.  
PR 19-JUL-1999; 99US-0144335.  
PR 20-JUL-1999; 99US-0144352.  
PR 20-JUL-1999; 99US-0144632.  
PR 20-JUL-1999; 99US-0144884.  
PR 21-JUL-1999; 99US-0144814.  
PR 21-JUL-1999; 99US-0145086.  
PR 21-JUL-1999; 99US-0145088.  
PR 22-JUL-1999; 99US-0145085.  
PR 22-JUL-1999; 99US-0145087.  
PR 22-JUL-1999; 99US-0145089.  
PR 22-JUL-1999; 99US-0145192.  
PR 23-JUL-1999; 99US-0145145.  
PR 23-JUL-1999; 99US-0145218.  
PR 23-JUL-1999; 99US-0145224.  
PR 26-JUL-1999; 99US-0145276.  
PR 27-JUL-1999; 99US-0145913.  
PR 27-JUL-1999; 99US-0145918.  
PR 27-JUL-1999; 99US-0145919.  
PR 28-JUL-1999; 99US-0145951.  
PR 02-AUG-1999; 99US-0146386.  
PR 02-AUG-1999; 99US-0146388.  
PR 02-AUG-1999; 99US-0146389.  
PR 03-AUG-1999; 99US-0147038.  
PR 04-AUG-1999; 99US-0147204.  
PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.  
PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 23-AUG-1999; 99US-0149930.  
PR 25-AUG-1999; 99US-0150566.  
PR 26-AUG-1999; 99US-0150884.  
PR 27-AUG-1999; 99US-0151065.  
PR 27-AUG-1999; 99US-0151066.  
PR 27-AUG-1999; 99US-0151080.  
PR 30-AUG-1999; 99US-0151303.  
PR 31-AUG-1999; 99US-0151438.  
PR 01-SEP-1999; 99US-0151930.  
PR 07-SEP-1999; 99US-0152363.  
PR 10-SEP-1999; 99US-0153070.  
PR 13-SEP-1999; 99US-0153758.  
PR 15-SEP-1999; 99US-0154018.  
PR 16-SEP-1999; 99US-0154039.  
PR 20-SEP-1999; 99US-0154779.  
PR 22-SEP-1999; 99US-0155139.  
PR 23-SEP-1999; 99US-0155486.  
PR 24-SEP-1999; 99US-0155659.  
PR 28-SEP-1999; 99US-0156458.  
PR 29-SEP-1999; 99US-0156596.  
PR 04-OCT-1999; 99US-0157117.  
PR 05-OCT-1999; 99US-0157753.  
PR 06-OCT-1999; 99US-0157865.

PR 07-OCT-1999; 99US-0158029.  
PR 08-OCT-1999; 99US-0158232.  
PR 12-OCT-1999; 99US-0158369.  
PR 13-OCT-1999; 99US-0159293.  
PR 13-OCT-1999; 99US-0159294.  
PR 13-OCT-1999; 99US-0159295.  
PR 14-OCT-1999; 99US-0159329.  
PR 14-OCT-1999; 99US-0159330.  
PR 14-OCT-1999; 99US-0159331.  
PR 14-OCT-1999; 99US-0159637.  
PR 14-OCT-1999; 99US-0159638.  
PR 18-OCT-1999; 99US-0159584.  
PR 21-OCT-1999; 99US-0160741.  
PR 21-OCT-1999; 99US-0160767.  
PR 21-OCT-1999; 99US-0160768.  
PR 21-OCT-1999; 99US-0160770.  
PR 21-OCT-1999; 99US-0160814.  
PR 21-OCT-1999; 99US-0160815.  
PR 22-OCT-1999; 99US-0160980.  
PR 22-OCT-1999; 99US-0160981.  
PR 22-OCT-1999; 99US-0160989.  
PR 25-OCT-1999; 99US-0161404.  
PR 25-OCT-1999; 99US-0161405.  
PR 25-OCT-1999; 99US-0161406.  
PR 26-OCT-1999; 99US-0161359.  
PR 26-OCT-1999; 99US-0161360.  
PR 26-OCT-1999; 99US-0161361.  
PR 28-OCT-1999; 99US-0161920.  
PR 28-OCT-1999; 99US-0161992.  
PR 28-OCT-1999; 99US-0161993.  
PR 29-OCT-1999; 99US-0162142.

Query Match 11.5%; Score 155; DB 21; Length 449;

Best Local Similarity 59.2%; Pred. NO. 3.4e-38;

Matches 260; Conservative 2; Mismatches 177; Indels 0; Gaps 0;

Qy 495 atagtaacttggccactaaaaagcataaaatttcagatttccagggtcccattttatggga 554  
Db 1 atgatgattggrcttctcgaggaggaccacactctgactttactgrrccaaattgtggga 60  
Qy 555 gtactgcagtgggtgctctgattcgtggcgaataaaactgttcgctgcgaacgctggagact 614  
Db 61 gtacagcatgtgtagcattagtcagaaataggccaactcgttgtggcaaatgctggtgact 120  
Qy 615 ctgcctgcataaatgtctcgacgtggcgaggctgtaaatctctcgattgatcacaaaccca 674  
Db 121 ccgcctgcgtcatctcaaggaaatgccagggcatacaaatgtgtcaagagaccataaacag 180  
Qy 675 acctagagcatgagaggaaggatagagagtgctggaggcttcgtccatgggtgcgtg 734  
Db 181 agcttgaggcagagagagaaaggatatacaaaagtccgggggttacattaaaatgggctg 240  
Qy 735 ttaacggtagtctaaatcttacaagagcaaataggggacatggaattcaagggtcgcacctg 794  
Db 241 taaatggaagtttaaattgtcaagagctattggagacatggagcttaaaaaacaagt 300  
Qy 795 atttgccacctgacaaagcagtagtgacgtgctgtccccgatgttgtcgaagttgaccttg 854  
Db 301 tcttgtccccctgataagcaaattttgaccgcgaacccctgacataaacattgtcgcgactat 360  
Qy 855 gacccggggatgaatttctgctgctggccctgtgatggaatatgggatgttctctagtc 914  
Db 361 gtgacgcacgcgaattcattgttttggcatgtgtatggcatttgggactgtcgaagcc 420  
Qy 915 aagctgtcgtggacttcgt 933  
Db 421 agcagttggttgatttcat 439

RESULT 9  
AAH26935  
ID AAH26935 standard; cDNA; 1824 BP.  
XX











KW phosphorylation dependent disease; leukaemia; breast; brain;  
KW prostate; epilepsy; fatty acid; cholesterol; ds.  
XX  
OS Homo sapiens.

Key Location/Qualifiers  
FH 1..1641  
FT CDS /\*tag= a  
FT /product= "MP-19"  
XX

PN EP874052-A2.

XX 28-OCT-1998.

XX 22-APR-1998; 98EP-0107346.

XX 22-APR-1997; 97EP-0106658.

PA (BIOP-) BIOPHARM GES BIOTECHNOLOGISCHEN ENTWICKL.

XX Hanke M, Paulista M, Pohl J;

XX WPI; 1998-544644/47.

DR P-PSDB; AAW80287.

XX DNA encoding human protein phosphatase polypeptide - useful in  
PT treatment of leukaemia, breast, brain and prostate cancer, epilepsy  
PT etc.

XX Claim 1; Page 11-12; 15pp; English.

XX The present sequence encodes full length human MP-19, which  
CC is a serine/threonine phosphatase derived from human placenta. The  
CC nucleic acid sequence encodes a human protein phosphatase of the  
CC protein serine/threonine phosphatase family and is of the pp2C class  
CC which are regulate in the regulation of fatty acid and cholesterol  
CC biosynthesis. The MP-19 protein is useful in the treatment of leukaemia,  
CC brain, prostate and breast cancer, Alzheimer's, Huntington's or  
CC Parkinson's diseases, epilepsy, reproductive disorders and regulation of  
CC spermatogenesis or maturation of mammalian germ cells.

XX Sequence 1641 BP; 462 A; 372 C; 500 G; 307 T; 0 other;

Query Match 9.5%; Score 127.8; DB 19; Length 1641;  
Best Local Similarity 59.5%; Pred. No. 2.5e-29;  
Matches 235; Conservative 0; Mismatches 157; Indels 3; Gaps 1;

QY 550 tgggagtactgcagtggtgctctgattcgttgccaataaactgttcgtcgcaaacgctgg 609

Db 981 tgggtacaacagcgggtggtgccctgtacacagagggaagcagtgattgtagccaacgcagg 1040

QY 610 agactctcgtgcataaatgtctcgacgtggcgaggcgtgtaaatctctcgattgatacaaa 669

Db 1041 agactctcgtgtgtgtatctcgaggctggcaagccttagacatgtcctatgatacaaa 1100

QY 670 acccaacctagagcatgagaggaaaaggatagagagtgcctggaggc---ttcgtccatgg 726

Db 1101 accagaggatgaagtagaactagcacgcacatcaagaatgctggtggcaaggtcacccatgga 1160

QY 727 tggctcgtgttaacggtagtctaaatcttacaaagacaaataggggacatggaaattcaaggg 786

Db 1161 tgggcgagtcaacggggggcctcaacctctccagagccattggggaccacttctataagag 1220

QY 787 tcgacctgatttgccacctgacaagcaagtagtgacgtgctgtccccgatgtttgtcgaaagt 846

Db 1221 aaacaagaacctgccacctgagggaacagatgatttcagcccttcctgacatcaaggtgct 1280

QY 847 tgacctggacccgggatgaatttatcgtgctggcctgtgatggaaatatgggattgttat 906

Db 1281 gactctcactgacgaccatgaattcatggtcatgtgcctgtgatggcatctcggaatgtgat 1340

QY 907 gtctagtcgaagctgctgtaggacttcgtttaaatcaa 941

Db 1341 gagcagccaggaagttgttagatttcattcaatcaa 1375

RESULT 13

ABL05227

ID ABL05227 standard; cDNA; 2268 BP.

XX ABL05227;

XX 26-MAR-2002 (first entry)

XX Drosophila melanogaster expressed polynucleotide SEQ ID NO 10163.

XX Drosophila; developmental biology; cell signalling; insecticide;  
KW pharmaceutical; gene; ss.

XX Drosophila melanogaster.

XX WO200171042-A2.

XX 27-SEP-2001.

XX 23-MAR-2001; 2001WO-US09231.

XX 23-MAR-2000; 2000US-191637P.

PR 11-JUL-2000; 2000US-0614150.

XX (PEKE ) PE CORP NY.

XX Venter JC, Adams M, Li PWD, Myers EW;

DR WPI; 2001-656860/75.

DR P-PSDB; ABB61124.

XX New isolated nucleic acid detection reagent for detecting 1000 or more  
PT genes from Drosophila and for elucidating cell signalling and cell-cell  
PT interactions -

XX Claim 1; SEQ ID NO 10163; 21pp + Sequence Listing; English.

CC The invention relates to an isolated nucleic acid detection reagent  
CC capable of detecting 1000 or more genes from Drosophila. The invention is  
CC useful in developmental biology and in elucidating cell signalling and  
CC cell-cell interactions in higher eukaryotes for the development of  
CC insecticides, therapeutics and pharmaceutical drugs. The invention  
CC discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA  
CC sequences (ABL01840-ABL16175) and the encoded proteins  
CC (ABB57737-ABB72072).

CC The sequence data for this patent did not form part of the printed  
CC specification, but was obtained in electronic format directly from WIPO  
CC at ftp.wipo.int/pub/published\_pct\_sequences.

XX Sequence 2268 BP; 772 A; 429 C; 479 G; 588 T; 0 other;

Query Match 9.3%; Score 124.6; DB 23; Length 2268;  
Best Local Similarity 55.1%; Pred. No. 3e-28;  
Matches 288; Conservative 0; Mismatches 229; Indels 6; Gaps 2;

QY 550 tgggagtactgcagtggtgctctgattcgttgccaataaactgttcgtcgcaaacgctgg 609

Db 1455 tggatgtactgcagttgtatgtttgttgcgaaggtcgggacctttacgtggcaaacgcagg 1514

QY 610 agactctcgtgcataaatgtctcgacgtggcgaggcgtgtaaatctctcgattgatacaaa 669

Db 1515 ggactcgcgatgtgttatatcacgcagcagtggaagccattgaaatgagcatcgaccacaa 1574

QY 670 acccaacctagagcatga---gaggaaaaaggatagagagtgcctgaggcttcgtccatgg 726

Db 1575 gcccgaaagatgacgaagaagcctcgcgcataataaaggcaggtggtcggttacacttga 1634

QY 727 tggctcgtgttaacggttagtctaatactttacaagagcaataggggacatgggaattcaaggg 786

Db 1635 tggacgcgtaaatggaggccttaattgtctcgagcccttgagaccatgcctataaaac 1694
 QY 787 tcgacctgatttgccacctgacaaagtagtgacgtgctgtccccgatgttgcgaagt 846
 Db 1695 gaacgtaacctaccagctgaggaacaatgatattctgcctacctgacataaaagct 1754
 QY 847 tgacctggaccggggatgaatttactgtgctggcctgtgatggaatatgggatgttat 906
 Db 1755 aattatcacgcagagacgagtttatgtgtactggcctgtgatgttatggaattatat 1814
 QY 907 gtctagtcaagctgtcgtggacttgctgttaaatcaagattacctaccaccaaaaactctatc 966
 Db 1815 gtctagtgaagagtgtagaattgttacgttgacagactaaaagataacaaaaattgtc 1874
 QY 967 atctttgtgagagatactggattactgtcttgtccccc---aaccacccgccagcaaga 1023
 Db 1875 aacgatttgtgaagagctttttgtataactgttttagctccgaatacaaatgggtgatgggac 1934
 QY 1024 aggatgtataaacatgagcatcattatagtcacaaaccaaagcaa 1066
 Db 1935 tggatgcgacaacatgactgccgttaatcgctccagtttaagaaa 1977

 RESULT 14
 AAT91793
 ID AAT91793 standard; DNA; 1824 BP.
 XX
 AC AAT91793;
 XX
 DT 07-APR-1998 (first entry)
 XX
 DE FIN13 serine/threonine phosphatase coding sequence.
 XX
 KW FIN13; serine/threonine phosphatase; hyperproliferative disorder;
 KW fibroblast growth factor-inducible protein; collagen-homology domain;
 KW uncontrolled proliferation; neoplasm; tumour; therapy; ds.
 XX
 OS Mus sp.
 XX
 FH Key Location/Qualifiers
 FT CDS 214..1392
 FT /\*tag= a
 XX
 PN WO9735018-A1.
 XX
 PD 25-SEP-1997.
 XX
 PF 21-MAR-1997; 97WO-US05075.
 XX
 PR 21-MAR-1996; 96US-0622339.
 PR 21-MAR-1996; 96US-0013792.
 XX
 PA (UYN Y ) UNIV NEW YORK STATE.
 XX
 PI Basilico C, Guthridge MA;
 XX
 DR WPI; 1997-480223/44.
 DR P-PSDB; AAW30091.
 XX
 PT Fibroblast growth factor-inducible protein (FIN13) serine-threonine
 PT phosphatase - used to treat a disease or disorder associated with
 PT uncontrolled proliferation
 XX
 PS Claim 9; Page 83-84; 116pp; English.
 XX
 CC This sequence represents the coding sequence for the protein of the
 CC invention. The protein of the invention is a fibroblast growth
 CC factor-inducible protein (FIN13) serine/threonine phosphatase, which has
 CC a collagen-homology domain, an acidic box, a serine/threonine phosphatase
 CC domain and a charged domain characteristic of a putative nuclear
 CC localisation sequence. A host cell transformed with this sequence is used
 CC for the recombinant production of FIN13. A vector containing this

CC sequence can be used to increase the level of expression of FIN13,
 CC especially to treat a disease or disorder associated with uncontrolled
 CC proliferation in an animal. FIN13 can also be administered directly to
 CC treat uncontrolled proliferation, e.g. hyperproliferative disorders,
 CC neoplasms and tumours. A labelled antibody against the encoded protein,
 CC or an antisense oligonucleotide against this sequence can be used to
 CC detect and quantitate FIN13 in a biological sample.
 XX
 SQ Sequence 1824 BP; 492 A; 414 C; 533 G; 385 T; 0 other;

 Query Match 8.9%; Score 120; DB 18; Length 1824;
 Best Local Similarity 57.2%; Pred. No. 7.4e-27;
 Matches 238; Conservative 0; Mismatches 175; Indels 3; Gaps 1;

 QY 529 agatttccagggtcccatttatggggagtactctcgctgcataatgtctcgacgtggcgaggctgt 588
 Db 714 agaagagcctggttctgacagtggcacaaacagcgtgtgtgctctgatcagagggaagca 773
 QY 589 actgttctgcgcaaacgctggagactctcgctgcataatgtctcgacgtggcgaggctgt 648
 Db 774 gttgatttggccaatgcaggagactctcgctgtgtgtgtccgaggtggcaaagcttt 833
 QY 649 aaatctctcgattgatcacaaaccccaacctagatgagcatgagaggaagagatagagatgc 708
 Db 834 agatatgtcctatgaccacaaaccagaggatgaagtggagctggcacgcatcaagaatgc 893
 QY 709 tggaggc---ttcgtcccatggtgtgctgttaacggtagtctaaatcttacaagagcaat 765
 Db 894 tggtgcaaggtcaccatggatggacgagtcaaatggaggcctcaacctctccagggccat 953
 QY 766 aggggacatggaattcaaagggctgacacctgatttggccacctgacaagcaagtagtgacgtg 825
 Db 954 tggagaccacttctacaagagaaaaaaacttggcaccctccaggaaacagatgatttctgc 1013
 QY 826 ctgtcccgatgttgcgaagttgaccttgaccctggacccgggagatgaattatcgtggtcctg 885
 Db 1014 ccttctcgacatcaaggtgctgactctcactgatgacctgaattcaatggtcattgcttg 1073
 QY 886 tgatggaatatgggatgttatgtctagtcaagctgtcgtggacttcgttaaatcaa 941
 Db 1074 tgacggcatctggaatgtgatgagcagccaggaggtttagactttattcaatcaa 1129

 RESULT 15
 ABL05226
 ID ABL05226 standard; cDNA; 4504 BP.
 XX
 AC ABL05226;
 XX
 DT 26-MAR-2002 (first entry)
 XX
 DE Drosophila melanogaster expressed polynucleotide SEQ ID NO 10160.
 XX
 KW Drosophila; developmental biology; cell signalling; insecticide;
 KW pharmaceutical; gene; ss.
 XX
 OS Drosophila melanogaster.
 XX
 PN WO200171042-A2.
 XX
 PD 27-SEP-2001.
 XX
 PF 23-MAR-2001; 2001WO-US09231.
 XX
 PR 23-MAR-2000; 2000US-191637P.
 PR 11-JUL-2000; 2000US-0614150.
 XX
 PA (PEKE ) PE CORP NY.
 XX
 PI Venter JC, Adams M, Li PWD, Myers EW;
 XX
 DR WPI; 2001-656860/75.

DR P-PSDB; ABB61123.

XX

PT New isolated nucleic acid detection reagent for detecting 1000 or more  
PT genes from Drosophila and for elucidating cell signalling and cell-cell  
PT interactions -  
XX

PS Claim 1; SEQ ID NO 10160; 2lpp + Sequence Listing; English.  
CX

CC The invention relates to an isolated nucleic acid detection reagent  
CC capable of detecting 1000 or more genes from Drosophila. The invention is  
CC useful in developmental biology and in elucidating cell signalling and  
CC cell-cell interactions in higher eukaryotes for the development of  
CC insecticides, therapeutics and pharmaceutical drugs. The invention  
CC discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA  
CC sequences (ABL01840-ABL16175) and the encoded proteins  
CC (ABB57737-ABB72072).

CC The sequence data for this patent did not form part of the printed  
CC specification, but was obtained in electronic format directly from WIPO  
CC at ftp.wipo.int/pub/published\_pct\_sequences.  
XX

SQ Sequence 4504 BP; 1541 A; 764 C; 807 G; 1392 T; 0 other;

Query Match            8.5%; Score 114.2; DB 23; Length 4504;

Best Local Similarity      55.4%; Pred. No. 8.1e-25;

Matches 243; Conservative 0; Mismatches 193; Indels 3; Gaps 1;

QY	550	tgggagtactgcagtggttgcgttcgtgatcgttggaataaaacgtttcgcaaacgcgtgg	609
Df	2638	tggatgtactgcagttgtatttgttgcaggctgccaccttacgtggcaaacgcagg	2697
QY	610	agactctcgctgcataaatgtctcgacgtggcgaggctgtaaaatctctcgatgatcacaa	669
Df	2698	ggactcgcgatgtgttatcatcagccagtcagtggaagaagccaatggaatgagcatgaccaca	2757
QY	670	accaaacctagagcatga---gaggaaaaaggatatagagtagctggaggcttgcctcattgg	726
Df	2758	gcccaaagatgacgaagaagcctcgcgcataataaaggcaggtggctcggtttacacttga	2817
QY	727	tggctgtttaacggttagtctaatacttaacaagagcaataggggacatgggaattcaaggg	786
Df	2818	tggacgcgtaaattggaggcccttaattgtctcagccccttgagaccatgcctataaaac	2877
QY	787	tcgacctgattggccacctgacaagcaagtagtgacgtgctgtccccgatgttgtcgaagt	846
Df	2878	gaacgtaacctaccagctgaggaacaaatgatatactgcctaccctgacataaagaagct	2937
QY	847	tgaccttggaccgggggatgaatttatcgtgctgcccctgtgatggaatatggatgttat	906
Df	2938	aattatcagccagaggacgagtttatggtactggccctgtgatggtatagaattatat	2997
QY	907	gtctagtcaagctgtcgtggacttcgtttaaatcaagattacctaaccacaaaactctatc	966
Df	2998	gtctagtagggaagttgtagaatttgtacgttgcagactaaaagataacaaaaaattgtc	3057
QY	967	atcttttgtgtgaggagata	985
Df	3058	aacgatttgaagaggta	3076



GenCore version 4.5  
Copyright (c) 1993 - 2000 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: June 19, 2002, 18:11:49 ; Search time 1901.09 Seconds  
(without alignments)  
14816.299 Million cell updates/sec

Title: US-09-828-302-9  
Perfect score: 1346  
Sequence: 1 gcgatcgcatttgcgaagg.....ccttctgccttcgatcgc 1346

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 1797656 seqs, 10463268293 residues

Total number of hits satisfying chosen parameters: 3595312

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database :				GenEmbl:*
	1:	gb_ba:*		
	2:	gb_htg:*		
	3:	gb_in:*		
	4:	gb_om:*		
	5:	gb_ov:*		
	6:	gb_pat:*		
	7:	gb_ph:*		
	8:	gb_pl:*		
	9:	gb_pr:*		
	10:	gb_ro:*		
	11:	gb_sts:*		
	12:	gb_sy:*		
	13:	gb_un:*		
	14:	gb_vi:*		
	15:	em_ba:*		
	16:	em_fun:*		
	17:	em_hum:*		
	18:	em_in:*		
	19:	em_mu:*		
	20:	em_om:*		
	21:	em_or:*		
	22:	em_ov:*		
	23:	em_pat:*		
	24:	em_ph:*		
	25:	em_pl:*		
	26:	em_ro:*		
	27:	em_sts:*		
	28:	em_un:*		
	29:	em_vi:*		
	30:	em_htg_hum:*		
	31:	em_htg_inv:*		
	32:	em_htg_other:*		
	33:	em_htgo_inv:*		

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES			
%			
Result	Query	Description	
No.	Score	Match Length DB ID	
-----			

1	324.4	24.1	1531	8	AY057611	AY057611 Arabidops
2	302	22.4	1463	8	AB079671	AB079671 Arabidops
3	302	22.4	1522	8	AY050873	AY050873 Arabidops
4	277.6	20.6	1107	8	AF213455	AF213455 Zea mays
5	146	10.8	1824	6	AX319337	AX319337 Sequence
6	129.4	9.6	1919	4	BTU81159	U81159 Bos taurus
7	127.8	9.5	1434	9	BC007361	BC007361 Homo sapi
8	127.8	9.5	1641	6	AX002424	AX002424 Sequence
9	127.8	9.5	1932	9	HSY13936	Y13936 Homo sapien
10	127.8	9.5	2169	9	BC022061	BC022061 Homo sapi
11	127.8	9.5	2176	9	BC000057	BC000057 Homo sapi
12	125.6	9.3	486	6	AX341828	AX341828 Sequence
13	125.6	9.3	492	6	AX351366	AX351366 Sequence
14	124.6	9.3	2510	3	AY051748	AY051748 Drosophil
15	121.6	9.0	1920	8	YSPPP2A	L34881 Schizosacch
16	121.6	9.0	43326	8	SPCC1223	AL031579 S.pombe c
17	120	8.9	1824	6	AR083379	AR083379 Sequence
18	120	8.9	2069	10	MMU42383	U42383 Mus musculu
19	120	8.9	2181	10	BC009004	BC009004 Mus muscu
20	115	8.5	3508	3	AF023665	AF023665 plasmodiu
21	114.2	8.5	8961	2	AC014563	AC014563 Drosophil
22	114.2	8.5	157371	3	AC009353	AC009353 Drosophil
23	114.2	8.5	185916	3	AC007587	AC007587 Drosophil
24	114.2	8.5	307471	3	AE003787	AE003787 Drosophil
25	106	7.9	111175	8	AC006585	AC006585 Arabidops
26	103.8	7.7	2976	4	BTAJ5458	AJ005458 Bos tauru
27	103.2	7.7	164595	3	AC011907	AC011907 Drosophil
28	103.2	7.7	310120	3	AE003468	AE003468 Drosophil
29	103	7.7	170575	2	AC019758	AC019758 Drosophil
30	99.6	7.4	1164	9	AF294792	AF294792 Homo sapi
31	99.6	7.4	1440	9	HSA5801	AJ005801 Homo sapi
32	99.6	7.4	2268	6	AR068480	AR068480 Sequence
33	99.6	7.4	2586	9	HSA271832	AJ271832 Homo sapi
34	99.6	7.4	2614	9	AK056009	AK056009 Homo sapi
35	99.6	7.4	2879	9	AF136972	AF136972 Homo sapi
36	99.6	7.4	3265	9	HSA271835	AJ271835 Homo sapi
37	99.6	7.4	168813	9	AC013717	AC013717 Homo sapi
38	98	7.3	110000	2	LMFLCHR32_16	Continuation (17 o
39	97.8	7.3	1395	6	E22127	E22127 Yeast capab
40	97.8	7.3	2250	8	SCU72498	U72498 Saccharomyc
41	97.8	7.3	64797	8	SCE9747	U18839 Saccharomyc
42	97.6	7.3	969	3	PPTP2CMR	Z36985 P.tetraurel
43	94.2	7.0	1673	3	AY051685	AY051685 Drosophil
44	94	7.0	36162	8	SPAC2G11	Z54354 S.pombe chr
45	93.2	6.9	68487	2	AC017782	AC017782 Drosophil

ALIGNMENTS

RESULT	1					
AY057611						
LOCUS	AY057611	1531 bp	mRNA	linear	PLN 17-OCT-2001	
DEFINITION	Arabidopsis thaliana	At4g31860/F11C18_60	mRNA	complete cds.		
ACCESSION	AY057611					
VERSION	AY057611.1	GI:16209697				
KEYWORDS	FLI_CDNA.					
SOURCE	thale cress.					
ORGANISM	Arabidopsis thaliana					
	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;					
	Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;					
	Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.					
REFERENCE	1 (bases 1 to 1531)					
AUTHORS	Cheuk,R., Chen,H., Kim,C.J., Koesema,E., Meyers,M.C., Banh,J.,					
	Bowser,L., Carninci,P., Dale,J.M., Goldsmith,A.D., Hayashizaki,Y.,					
	Ishida,J., Jiang,P.X., Jones,T., Kamiya,A., Karlin-Neumann,G.,					
	Kawai,J., Lam,B., Lee,J.M., Lin,J., Liu,S.X., Miranda,M.,					
	Narusaka,M., Nguyen,M., Onodera,C.S., Palm,C.J., Pham,P.K.,					
	Quach,H.L., Sakurai,T., Satou,M., Seki,M., Southwick,A., Tang,C.C.,					
	Toriumi,M., Yamada,K., Yamamura,Y., Yu,G., Yu,S., Shinozaki,K.,					
	Davis,R.W., Theologis,A. and Ecker,J.R.					
TITLE	Arabidopsis cDNA clones					
JOURNAL	Unpublished					













Db	601	TCTCTGGCTGCACTGCCTGCGTCACCCCTGATTGCCGGAACAAACAACTATATGTGCGCCAACG	660
QY	606	ctggagactctcgtgcataaatgtctcgacgtggcgaggctgtaaatctctcgtattgatc	665
Db	661	CCGCTGATTCTCGAAGCGTGCTGGGCATCAAGGACGGGCCAAACCCCTATCCAACGACC	720
QY	666	acaaacccaacctagagcatgagaggaaaaggatagagagtgtctggaggcttcgtccatg	725
Db	721	ACAAGCCTCAGCTTGAAACGGAGAGAACCAGAACCCAGCCGCTGGCGGTTTCGTCGACT	780
QY	726	gtggctcgtgtttaacggtagtctaaatcttacaagagcaaataggggacatggaattcoaag	785
Db	781	TGCGCCGAGTCAACGGCAATCTGGCTCTGTGCGGTGCCATTGGCGCACTTTGAATTCAAGA	840
QY	786	gtcgacctgatttggcaccttgacaagcaagtagtgacgtgtgctcccgatgttgtcgaag	845
Db	841	AGAGCGCGAGCTGTCCCCCGAAAACCAAGATCGTTACCGCCTTTCGCCGATGTCGAGGTGC	900
QY	846	ttgaccttggacccggggatgaatttatctgtgctggccctgtgtgatggaatatgggatgta	905
Db	901	ACGAGCTTACAGAGGAGACGAGTTCCCTGGTGATTGCCTGTGACGGTATCTGGGATTGCC	960
QY	906	tgtctagtcaagctgtcgtggacttcgtttaaatcaagattacctaacccaaaaactctat	965
Db	961	AATCTTCCCAGGCTGTGTTGAGTTTGTGCGACGAGGCATCGCCGCCAAGSACGACCTTG	1020
QY	966	catctttgtgtgaggagatactgtgattactgtcttgtccccaaccac	1011
Db	1021	ACAAGATCTGCGAGAACATGATGGACAACCTGCCTTGGTCCCAACTC	1066
RESULT 6			
BTU81159			
LOCUS			
DEFINITION			
ACCESSION			
VERSION			
KEYWORDS			
SOURCE			
ORGANISM			
REFERENCE			
AUTHORS			
TITLE			
JOURNAL			
REFERENCE			
AUTHORS			
TITLE			
JOURNAL			
FEATURES			
source			
CDS			

BASE COUNT			
ORIGIN			
Query Match			
Best Local Similarity			
Matches			
QY	550	tgggagtactgcagtggtggtctctgtattctgtggcaataaaactgttctgcgcaaacgctgg	609
Db	1146	TGGTACAACAGCAGTGGTGGCTCTGTATACGAGGGAAGCAGTTGATTGTAGCCCAATGCAGG	1205
QY	610	agactctcgtcgcataaatgtctcgacgtggcgaggctgtataatctctcgtattgatcaca	669
Db	1206	AGACTCCCGCTGTGTGGTGTCTGTAGGCCCGCAAGACTTTAGACATGTCCTATGACCACAA	1265
QY	670	accacacctagacatgagaggaaaaggatagagagtgtctggaggcttcgt---ccatgg	726
Db	1266	ACCGGAGGATGAAGTGGAGCTAGCACGCATCAAGAAATGCTGGGGCAAGGTTACCATGGA	1325
QY	727	tggtcgtgttaacggtagtctaaatcttacaagagcaaataggggacatggaattcaaggg	786
Db	1326	TGGGCGAGTCAACGGTGGCCTCAACCTCTCCAGAGCCATTGGAGACCACCTTTTACAAGAG	1385
QY	787	tcgacctgatttggcaccttgacaagcaagtagtgacgtgtgtcccgatgttgtcgaagt	846
Db	1386	AAACAAGAACTTGCCACCAGAGGAACAGATGATTTCGGCCCTTCTCTGACATCAAGGTGCT	1445
QY	847	tgaccttggacccggggatgaatttatctgtctggcctgtgtgatgggaatgggatgttat	906
Db	1446	GACTCTCACAGATGATCATGAGTTTATGGTCATTGCCTGTGATGGCATATGGAATGTGAT	1505
QY	907	gtctagtcaagctgtcgtggacttcgtttaaatcaa	941
Db	1506	GAGCAGCCAGGAAGTTATAGACTTTATTCAATCGA	1540
RESULT 7			
BC007361			
LOCUS			
DEFINITION			
ACCESSION			
VERSION			
KEYWORDS			
SOURCE			
ORGANISM			
REFERENCE			
AUTHORS			
TITLE			
JOURNAL			
REMARK			
COMMENT			

RGKOLIVANAGDSRCVVSRAGKALDMSYDHKPEDEVELARIKNAGGKVTMDGRVNGGL  
NLSRAIGDHFYKRNKNLPPEEQMISALPDIKVLTLTDDHEFMVIACDGIWNVMSSQEV  
IDFIQSKISQDENGELRLSSIVEYLLDQCLAPDTSGDGTGCDNMTCIICFKPRNT  
AAPQESGKRKLEEVLSSTEGAEQNGHSDKKKAKRD"

489 a 458 c 587 g 385 t

9.6%; Score 129.4; DB 4; Length 1919;  
59.7%; Pred. No. 3.6e-26;  
0; Mismatches 156; Indels 3; Gaps 1;

BC007361 1434 bp mRNA linear PRI 12-JUL-2001  
Homo sapiens, Similar to protein phosphatase 1G (formerly 2C),  
magnesium-dependent, gamma isoform, clone IMAGE:3627167, mRNA,  
partial cds.  
BC007361  
BC007361.1 GI:13938439  
human.  
Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  
1 (bases 1 to 1434)  
Strausberg, R.  
Direct Submission  
Submitted (01-MAY-2001) National Institutes of Health, Mammalian  
Gene Collection (MGC), Cancer Genomics Office, National Cancer  
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,  
USA  
NIH-MGC Project URL: <http://mgc.nci.nih.gov>  
Contact: MGC help desk  
Email: [cgapbs-r@mail.nih.gov](mailto:cgapbs-r@mail.nih.gov)  
Tissue Procurement: ATCC  
cDNA Library Preparation: Rubin Laboratory  
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)  
DNA Sequencing by: Institute for Systems Biology  
<http://www.systemsbiology.org>  
contact: [amadan@systemsbiology.org](mailto:amadan@systemsbiology.org)  
Anup Madan, Rachel Dickhoff, Jessica Fahey, Stephanie Ford, Julia  
Greene, Mark Kettelman and Anuradha Madan









Ddb	124	GATGAAGTAGAAGTACGACGCATCAAGAATGCTGGTGGCAAGGTCACCATGGATGGGCGA	183
QY	734	gttaacggtagtctaaatcttacaagagcaatagggacatggaattcaagggtcgacct	793
Ddb	184	GTCAACGGGGCCCTCAACCTCTCCAGAGCCATTGGGACCACCTTCTACAAGAGAAACAAG	243
QY	794	gatttgccacctgacaagcaagtagtgacgtgctgtcccgatgttgtcgaagttgacctt	853
Ddb	244	AACCTGCCACCTGAGGAACAGATGATTTCAGCCCTTCCTGCACATCAAGGTGCTGACTCTC	303
QY	854	ggaccggggatgaatttatcgtgctggcctgtgatggaatatgggatgttatgtctagt	913
Ddb	304	ACTGACGACCATGAATTTCATGCTCATTTGCCCTGTGATGGCATCTGGAATGTGATGAGCAGC	363
QY	914	caagctgtgctgggacttcgtttaaatcaa	941
Ddb	364	CAGGAAGTTGTAGATTTCATTCAATCAA	391
RESULT 13			
AX351366/C			
LOCUS			
DEFINITION			
ACCESSION			
VERSION			
KEYWORDS			
SOURCE			
ORGANISM			
REFERENCE			
AUTHORS			
TITLE			
JOURNAL			
FEATURES			
source			
BASE COUNT			
ORIGIN			
Query Match			
Best Local Similarity			
Matches			
QY	557	actgcagtggtggtctgtattcgtggcaataaaactgttcgtcgcaaacgctggagactct	616
Ddb	489	ACAGCGGTGGTGGCCCTGATACGAGAGAACGAGTGTGATTGTAGCAACGCAGGAGACTCT	430
QY	617	cgctgcataatgtctcgacgtggcgaggctgtgtaaatctctcgattgatcacaaacccaac	676
Ddb	429	CGCTGTGTTATCTGAGGCTGGCAAAGCTTAGACATGTCCATGATCACAAACCCAGAG	370
QY	677	ctagagcatgagaggaagagatagagagtgcctggaggc---ttcgtccatggtggtcgt	733
Ddb	369	GATGAAGTAGAAGTACGACGCATCAAGRAATGCTGGTGGCAAGTCCACCATGGATGGGCGA	310
QY	734	gttaacggttagtctaatacttacaagagcaatagggacatggaattcaagggtcgacct	793
Ddb	309	GTCAACGGGGCCCTCAACCTCTCCAGAGCCATTGGGGACCACCTTCTACAAGAGAAACAAG	250
QY	794	gatttgccacctgacaagcaagtagtgacgtgctgtcccgatgttgtcgaagttgacctt	853
Ddb	249	AACCTGCCACCTGAGGAACAGATGATTTCAGCCCTTCCTGCACATCAAGGTGCTGACTCTC	190
QY	854	ggaccggggatgaatttatcgtgctggcctgtgatggaatatgggatgttatgtctagt	913
Ddb	189	ACTGACGACCATGAATTTCATGGTTCATTGCTGTGATGGCATCTGGAATGTGATGAGCAGC	130

QY	914	caagctgctgggacttcgtttaaatcaa	941
Db	129	CAGGAAGTTGTAGATTTCATTCAATCAA	102
RESULT	14		
AY051748			
LOCUS	AY051748	2510 bp	mRNA linear INV 27-AUG-2001
DEFINITION	Drosophila melanogaster LD27655 full length cDNA.		
ACCESSION	AY051748		
VERSION	AY051748.1	GI:15291806	
KEYWORDS	FLI_CDNA.		
SOURCE	fruit fly.		
ORGANISM	Drosophila melanogaster		
	Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.		
REFERENCE	1 (bases 1 to 2510)		
AUTHORS	Stapleton,M., Brokstein,P., Hong,L., Agbayani,A., Carlson,J., Champe,M., Chavez,C., Dorsett,V., Farfan,D., Frise,E., George,R., Gonzalez,M., Guarin,H., Li,P., Liao,G., Miranda,A., Mungall,C.J., Nunoo,J., Pacleb,J., Paragas,V., Park,S., Phouanavong,S., Wan,K., Yu,C., Lewis,S.E., Rubin,G.M. and Celniker,S.		
TITLE	Direct Submission		
JOURNAL	Submitted (10-AUG-2001) Berkeley Drosophila Genome Project, Lawrence Berkeley National Laboratory, One Cyclotron Road, Berkeley, CA 94720, USA		
COMMENT	Sequence submitted by: Berkeley Drosophila Genome Project Lawrence Berkeley National Laboratory Berkeley, CA 94720 This clone was sequenced as part of a high-throughput process to sequence clones from Drosophila Gene Collection 1 (Rubin et al., Science 2000). The sequence has been subjected to integrity checks for sequence accuracy, presence of a polyA tail and contiguity within 100 kb in the genome. Thus we believe the sequence to reflect accurately this particular cDNA clone. However, there are artifacts associated with the generation of cDNA clones that may have not been detected in our initial analyses such as internal priming, priming from contaminating genomic DNA, retained introns due to reverse transcription of unspliced precursor RNAs, and reverse transcriptase errors that result in single base changes. For further information about this sequence, including its location and relationship to other sequences, please visit our web site (http://fruitfly.berkeley.edu) or send email to cdna@fruitfly.berkeley.edu.		
FEATURES	Location/Qualifiers		
source	1. .2510		
	/organism="Drosophila melanogaster"		
	/strain="y; cn bw sp"		
	/db_xref="taxon:7227"		
	/map="41F5-41F5"		
gene	1. .2510		
	/gene="CG10417"		
	/note="alignment with genomic scaffold AE003787"		
	/db_xref="FLYBASE:FBgn0033021"		
	247. .2235		
	/gene="CG10417"		
	/note="Longest ORF"		
	/codon_start=1		
	/db_xref="FLYBASE:FBgn0033021"		
	/product="LD27655p"		
	/protein_id="AAK93172.1"		
	/db_xref="GI:15291807"		
CDS	/translation="MGAYLSHPKTDKTDQFNELLAVGASSMQGWRNSQEDAHNSIL NFDNNTSFFAVYDGHGGEVAQYCADKLPHFLKNLETYKNGQFEVALKEAFLGFDKTL LDPSIVSILKILAGEHNFVDAEADDEEDLAELQESNLPLNEVLEKYKGLPQKKDL DLKSSDHKENFKMRSPYFRGRRAAALAAEATNKAVMDPSAKPDGSSTSAAAAALSA DGVANSRNPNSVNVNPMAGADSNSTTTINDLSTKNAALKDDSVNDQNEGSNGTDFKHTL VSSSNKKLFATGSDMTNELNQSSKNFTNSSTSKEFERNINSQQDEFTDDADYEEN DNVKSPDTSSAESDCTENDDDGDEGDNEDSDDEETDEQMANDNFCANMTEEPGKDS GCTAVVCLLQGRDLYVANAGDSRCVISRSGQAITEMSIDHKPEDDEEASRIKAGGRVT LDGRVNGGLNLSRALGDHAYKTNVTLPAAEQMISALPDIKKLIITPEDEFMVLACDGI		















[illegible]

```

RESULT      5
Q9VZS1
ID Q9VZS1      PRELIMINARY;      PRT;      371 AA.
AC Q9VZS1;
DT 01-MAY-2000 (TREMBLrel. 13, Created)
DT 01-MAY-2000 (TREMBLrel. 13, Last sequence update)
DT 01-OCT-2001 (TREMBLrel. 18, Last annotation update)
DE CG17746 PROTEIN.
GN CG17746.

```

OS Drosophila melanogaster (Fruit fly).  
 OC Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;  
 OC pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;  
 OC Ephydroidea; Drosophilidae; Drosophila.  
 OX NCBI\_TaxID-7227;  
 RN [1]

RP	SEQUENCE FROM N.A.
RC	STRAIN=BERKELEY;
RX	MEDLINE=20196006; PubMed=10731132;
RA	Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA	Amantides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA	George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA	Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA	Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA	Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA	Abrial J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA	Ballev R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA	Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA	Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA	Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA	Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA	de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA	Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA	Durbin K.J., Evangelista C.C., Ferraz C., Ferreira S., Fleischmann W.,
RA	Fosler C., Gabriellian A.E., Garg N.S., Gelbart W.M., Glasser K.,
RA	Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA	Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA	Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
RA	Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
RA	Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA	Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA	Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
RA	Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA	Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA	Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA	palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA	Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA	Shue B.C., Siden-Kiamos I., Simpsons M., Skupski M.P., Smith T.,
RA	Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,

Query Match	30.4%;	Score 558.5;	DB 5;	Length 371;
Best Local Similarity	37.6%;	Pred. No. 5.8e-37;		
Matches 128; Conservative	50;	Mismatches 103;	Indels 59;	Gaps 5;

Qy	1	MGIYLCSPKTDKTSEDDENAELRYGLSAMQWRDSMEDAHKAILNVDKNTSTSI GFIDG	60
		:            :            :   :	
Dd	1	MGOTLSEPVTAKEYACYNAAAYRVSSCMQWRINMEDSHTILSLPDDPGAAFFAVYDG	60
Qy	61	HGGKLVAKFCAKHLHQEVLKSEAYAKGDLKASLEYSFLRMDEMKGAGWKELQSLETS	120
		::     :       : ::  :     :   :	
Dd	61	HGGATVAQYAGKHLHKYVLRPEY -NDNIEALQQGFLDIDVM-----	103
Qy	121	SQDLKLGNGNSSNAREDDSDSYAVLTESDNLATKKHKYSDFQGPIYGSTAWVALI	180
		:     :     :     :     :     :     :   :	
Dd	104	-----LRNKTCGDQ-----MAGSTAVWLV	123
Qy	181	RGNKLFVANAGDSRCIMSRGCEAVNLSIDHKPNLEHERKRIESAGGFVHGGRVNGSLNLT	240
		:    :          :     :                  :    :   :	
Dd	124	KDNKLYCANAGDSRAIACVNGQLLEVLSLDHKPPNNEAEKRIIQGGGWVEFNVRNGNLALS	183
Qy	241	RAIGDMFEFKGRPDLPPDKQVVTCPPDWVEVDLGPGEFIVLACDGIWDVMSSQAUVDEVK	300
		:        :   :         :                     :   :   :	
Dd	184	RALGDYVFK - HENKKPEDQIVTAFDPDVETRKIMDDWEFIVLACDGIWDVMNAEVLEFCR	242
Qy	301	SRLPPTTKTLSSLCEEILDYCLSPTTTRQOE-GCDNNMSIIIV	339
		:  : :    : ::        :         :         :	
Dd	243	TRIGMGMFPEEICEELNMHCLAPDCQMGGGLGGDNMTVVLV	282

## RESULT 6

Q9W0Q0	Q9W0Q0	PRELIMINARY;	PRT;	352 AA.
AC	Q9W0Q0;			
DT	01-MAY-2000	(TrEMBLrel. 13, Created)		
DT	01-MAY-2000	(TrEMBLrel. 13, Last sequence update)		
DT	01-OCT-2001	(TrEMBLrel. 18, Last annotation update)		
DE	CG12169	PROTEIN.		
GN	CG12169.			
OS	Drosophila melanogaster (Fruit fly).			
OC	Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;			
OC	pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;			
OC	Ephydroidea; Drosophilidae; Drosophila.			
OX	NCBI_TaxID=7227;			
RN	[1]			
RP	SEQUENCE FROM N.A.			

RP SEQUENCE FROM N.A.  
RC STRAIN=BERKELEY;  
RX MEDLINE=20196006; PubMed=10731132;  
RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,  
RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,  
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,  
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,  
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,  
RA Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,





Db	1	MGGFLEKPETEKQAEQHGNGRLRYCVSSMOGWRLMEDSHSAACRLKDPFATWSYFAVD	60
QY	60	GHGKLVAKFCAKHLHQLKSEAYAKAGDLKASLEYSFLRDMKMGASGWKELQSLEET	119
Db	61	GHAGSQISLHCAEHLMSLILESEFSKHKYEAGIREGFLQDDEMR-----	106
QY	120	SSQLDKLGNNGSSNAREDDSDYSYAVLTESNDSNLATKKHKYSDFQGPIYGSTAVVAL	179
Db	107	-----KL-----YHQQG---GSTAICVF	122
QY	180	IRGNKLFVANAGDSRCIMSRGGEAVNLSIDHKPNLEHERKRIESAGGFVHGVRVNGSLNL	239
Db	123	VSPDKIYLVNCGDSRAVISRNGAAVISTIDHKPFSPKEQERIQNAGGSVMIKRINGTLAV	182
QY	240	TRAIGDMEFKGRPDLPDPKQVVTCCPDVVEVDLGPGEFIVLACDGIWDMSSQAVVDFV	299
Db	183	SRAFGDYDFKNDGSKSPVDQMVSPEDIIIVCNRSEHDEFIVVACDGIWDMTSSEVCEFI	242
QY	300	KSRLPPTTKTLSSLCEEILDYCLSPTRRQEQECDNMSIIIV---QPK--QSGVAASSSTD	353
Db	243	RSRLLVTYDLPMIVNSVLDICLHKGSR-----DNMTLLLLLPGAPKVDMDAVKAERSLD	297
RESULT	8		
Q9GPU5			
ID	Q9GPU5	PRELIMINARY; PRT; 280 AA.	
AC	Q9GPU5;		
DT	01-MAR-2001	(TREMBLrel. 16, Created)	
DT	01-MAR-2001	(TREMBLrel. 16, Last sequence update)	
DT	01-DEC-2001	(TREMBLrel. 19, Last annotation update)	
DE	PHOSPHATASE 2C (FRAGMENT).		
GN	PP2C.		
OS	Sterkiella histriomuscorum.		
OC	Eukaryota; Alveolata; Ciliophora; hypotrichs; Stichotrichida;		
OC	Oxytrichidae; Sterkiella.		
OX	NCBI_TaxID=94289;		
RN	[1]		
RP	SEQUENCE FROM N.A.		
RA	Villalobo E., Moch C., Perasso R., Baroin-Tourancheau A.;		
RT	"Searching for excystment-regulated genes in Sterkiella		
RT	histriomuscorum (Ciliophora, Oxytrichidae): a mRNA differential		
RT	display analysis of gene expression in excysting cells.;"		
RL	Submitted (SEP-2000) to the EMBL/GenBank/DBJ databases.		
DR	EMBL; AF309503; AAG47769.1; -.		
DR	HSSP; P35813; 1A6Q.		
DR	InterPro; IPR000222; PP2C.		
DR	InterPro; IPR001932; PP2C_domain.		
DR	Pfam; PF00481; PP2C; 1.		
DR	SMART; SM00332; PP2CC; 1.		
DR	SMART; SM00331; PP2C_SIG; 1.		
DR	PROSITE; PS01032; PP2C; 1.		
FT	NON_TER 280		
SQ	SEQUENCE 280 AA; 31289 MW; 07252EE8D154CA82 CRC64;		
Query Match	29.7%;	Score 545;	DB 5; Length 280;
Best Local Similarity	41.3%;	Pred. No. 4.8e-36;	
Matches	124;	Conservative 45;	Mismatches 87; Indels 44; Gaps 7;
Qy	1	MGIYLCSPKTKTSEDENAEALRYGLSAMQGWDRSMEDAHKAILNVDKNTSTSI	GIFDG 60
Db	1	MGDYLSVPDKNKHSEGGKDHRIAFAFGATTMQGWRKQTQEDAH--IARLDIGDGN	SLFAVFDG 58
Qy	61	HGGKLVAKFCAKHLHQLKSEAYAKGDLKASLEYSFLRDMKMGASGWKELQSLEETS	120
Db	59	HGGDQVAKYAEKTMVQELLKLSQYKDKDYKKSLEEVFLKIDELM-----LQHIRQ--	108
QY	121	SQLDKLGNNGSSNAREDDSDYSYAVLTESNDSNLATKKHKYSDFQGPIYGSTAVVALI	180
Db	109	-----NG-SSGRSRFDDYS-----ADPNLSES-----GCTSNVILI	139
QY	181	RGNKLFVANAGDSR---CIMSRRGEAVNLSIDHKPNLEHERKRIESAGGFVHGVRVNGSL	237

Db	140	TKDKIYCANAGDSRAVMCVFGSGPETVELSHDHKPDNETEKQRIVNADGFVQMGRNGVI	199
QY	238	NLTRAIGDMEFKGRPDLPDPKQVVTCCPDVVEVDLGPGEFIVLACDGIWDMSSQAVVD	297
Db	200	SLSRALGDFDYKKKADFPPEKQATTAFDPVSEHDLTENCQFIVQACDGIWDCLTSP	259
RESULT	9		
Q9VAK1			
ID	Q9VAK1	PRELIMINARY; PRT; 368 AA.	
AC	Q9VAK1;		
DT	01-MAY-2000	(TREMBLrel. 13, Created)	
DT	01-MAY-2000	(TREMBLrel. 13, Last sequence update)	
DT	01-OCT-2001	(TREMBLrel. 18, Last annotation update)	
DE	CG1906	PROTEIN.	
GN	CG1906.		
OS	Drosophila melanogaster (Fruit fly).		
OC	Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;		
OC	Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;		
OC	Ephydroidea; Drosophilidae; Drosophila.		
OX	NCBI_TaxID=7227;		
RN	[1]		
RP	SEQUENCE FROM N.A.		
RC	STRAIN=BERKELEY;		
RX	MEDLINE=20196006; PubMed=10731132;		
RA	Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,		
RA	Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,		
RA	George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,		
RA	Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,		
RA	Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,		
RA	Wan K.H., Doyle C., Baxter E.G., Heit G., Nelson C.R., Miklos G.L.G.,		
RA	Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,		
RA	Balieu R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,		
RA	Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,		
RA	Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,		
RA	Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,		
RA	Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,		
RA	de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,		
RA	Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,		
RA	Durbin K.J., Evangelista C.C., Ferraz C., Ferreira S., Fleischmann W.,		
RA	Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,		
RA	Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,		
RA	Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,		
RA	Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,		
RA	Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,		
RA	Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,		
RA	Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,		
RA	Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,		
RA	Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,		
RA	Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,		
RA	Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,		
RA	Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,		
RA	Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,		
RA	Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,		
RA	Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,		
RA	Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,		
RA	Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,		
RA	Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,		
RA	Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,		
RA	Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu S., Zhu X., Smith H.O.,		
RA	Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.;		
RT	"The genome sequence of Drosophila melanogaster.;"		
RL	Science 287:2185-2195(2000).		
DR	EMBL; AE003770; AAF56905.1; -.		
DR	HSSP; P35813; 1A6Q.		
DR	FlyBase; FBgn0039672; CG1906.		
DR	InterPro; IPR000222; PP2C.		
DR	InterPro; IPR001932; PP2C_domain.		
DR	Pfam; PF00481; PP2C; 1.		
DR	SMART; SM00332; PP2CC; 1.		
DR	SMART; SM00331; PP2C_SIG; 1.		
DR	PROSITE; PS01032; PP2C; 1.		
DR	PROSITE; PS01032; PP2C; 1.		

SQ	SEQUENCE	368 AA;	40955 MW;	6ED4A4354159F274	CRC64;	
	Query Match	29.4%;	Score 540.5;	DB 5;	Length 368;	
	Best Local Similarity	34.6%;	Pred. No. 1.7e-35;			
	Matches 123;	Conservative 63;	Mismatches 104;	Indels 65;	Gaps 5;	
QY	1	MGIIYLCSPKTDKTS	EDDENAELRYGLSAMQGW	RDSMEDAHKAILNV-DKNTST	SIFGIFD 59	
		:       ::  :  : : :        :  :  :  :				
Db	1	MGGFLDKPKTAKHN	DEGEKNLLFGVSSMQGWR	SEMEDAYARAGLDALPD	WSFFAVFD 60	
		::       ::  :  :  :  : : :        :  :				
QY	60	GHGGLVAKFCAKHL	HQEVLKSEAYAKGDLKAS	LEYSFLRMDMMKGASG	WKELQSLEET 119	
		::       ::  :  :  :  : : :        :  :				
Db	61	GHAGCKVSEHCAKHL	LESIIISTEEFIGGDHVK	GIRTFGLRIDEVMR	-----ELPEF 111	
		::       ::  :  :  :  : : :        :  :				
QY	120	SSQLDKLGNSSNARE	DDSDYSYAVLTESNDS	NLATKKHKYSDFQGI	YGSTAVVAL 179	
		: :				
Db	112	TRESEKCG-	-----	-----	GTTAVCAF 127	
		: :				
QY	180	IRGNKLFVANAGDS	RCSIMSRRGEAVNLSID	HKPNLEHERKRIESAG	GFVHGGRVNGSLNL 239	
		: ::::         ::  :  :          :  :				
Db	128	VGLTQVIANC	GDRAVLCRQGVVFATQ	DHKPILPEKERIYNAG	GSVMIKRVNGTLAV 187	
		: ::::         ::  :  :          :  :				
QY	240	TRAIGDMFEKGRPD	LPDPKQVVTCCPDVVE	VDLGPGBEFIVLACD	GIWDMSSQAVVDFV 299	
		: : :        :  : :        :  :  :  : : :				
Db	188	SRALGDYDFKNVKE	GQCEQLVSPPEIFCQ	RQSDSEFLVLACD	GIWDMSNEDVCSFI 247	
		::       ::  :  :  :  : : :        :  :				
QY	300	KSRLPTTKTSSLC	EEILDYCLSPTRQEG	CDNMSIIIV-----	QPKQSGVAA 348	
		:        :  : :        :  :				
Db	248	HSRMRVTSNLVSI	ANQVVDTCCLKGSR	-----DNMSIIIAFP	GAPKPKTEEAIEA 297	
		:        :  : :        :  :				
RESULT	10					
Q961C5						
ID	Q961C5	PRELIMINARY;	PRT;	374 AA.		
AC	Q961C5;					
DT	01-DEC-2001	(TReMBLrel. 19, Created)				
DT	01-DEC-2001	(TReMBLrel. 19, Last sequence update)				
DE	LD23542P.					
GN	CG1906.					
OS	Drosophila melanogaster	(Fruit fly).				
OC	Eukaryota; Metazoa; Arthropoda;	Tracheata; Hexapoda; Insecta;				
OC	Pterygota; Neoptera; Endopterygota;	Diptera; Brachycera; Muscomorpha;				
OC	Ephydroidea; Drosophilidae; Drosophila.					
OX	NCBI_TaxID=7227;					
RN	[1]					
RP	SEQUENCE FROM N.A.					
RC	STRAIN=Y, CN BW SP;					
RA	Stapleton M., Brokstein P., Hong L., Agbayani A., Carlson J.,					
RA	Champe M., Chavez C., Dorsett V., Farfan D., Frise E., George R.,					
RA	Gonzalez M., Guarin H., Li P., Liao G., Miranda A., Mungall C.J.,					
RA	Nunoo J., Pacleb J., Paragas V., Park S., Phouanavong S., Wan K.,					
RA	Yu C., Lewis S.E., Rubin G.M., Celniker S.;					
RL	Submitted (AUG-2001) to the EMBL/GenBank/DBBJ databases.					
DR	EMBL; AY051685; AAK93109.1; -.					
SQ	SEQUENCE	374 AA;	41629 MW;	37CA399271627F7D	CRC64;	
	Query Match	29.4%;	Score 540.5;	DB 5;	Length 374;	
	Best Local Similarity	34.6%;	Pred. No. 1.7e-35;			
	Matches 123;	Conservative 63;	Mismatches 104;	Indels 65;	Gaps 5;	
QY	1	MGIIYLCSPKTDKTS	EDDENAELRYGLSAMQGW	RDSMEDAHKAILNV-DKNTST	SIFGIFD 59	
		:       ::  :  : : :        :  :  :  :				
Db	1	MGGFLDKPKTAKHN	DEGEKNLLFGVSSMQGWR	SEMEDAYARAGLDALPD	WSFFAVFD 60	
		::       ::  :  :  :  : : :        :  :				
QY	60	GHGGLVAKFCAKHL	HQEVLKSEAYAKGDLKAS	LEYSFLRMDMMKGASG	WKELQSLEET 119	
		::       ::  :  :  :  : : :        :  :				
Db	61	GHAGCKVSEHCAKHL	LESIIISTEEFIGGDHVK	GIRTFGLRIDEVMR	-----ELPEF 111	
		::       ::  :  :  :  : : :        :  :				
QY	120	SSQLDKLGNSSNARE	DDSDYSYAVLTESNDS	NLATKKHKYSDFQGI	YGSTAVVAL 179	
		: :				

Db	112	TRESEKCG-	-----	-----	GTTAVCAF 127	
		: ::::         ::  :  :          :  :				
QY	180	IRGNKLFVANAGDS	RCSIMSRRGEAVNLSID	HKPNLEHERKRIESAG	GFVHGGRVNGSLNL 239	
		: ::::         ::  :  :          :  :				
Db	128	VGLTQVIANC	GDRAVLCRQGVVFATQ	DHKPILPEKERIYNAG	GSVMIKRVNGTLAV 187	
		: ::::         ::  :  :          :  :				
QY	240	TRAIGDMFEKGRPD	LPDPKQVVTCCPDVVE	VDLGPGBEFIVLACD	GIWDMSSQAVVDFV 299	
		: : :        :  : :        :  :  :  : : :				
Db	188	SRALGDYDFKNVKE	GQCEQLVSPPEIFCQ	RQSDSEFLVLACD	GIWDMSNEDVCSFI 247	
		: :        :  : :        :  :  :  : : :				
QY	300	KSRLPTTKTSSLC	EEILDYCLSPTRQEG	CDNMSIIIV-----	QPKQSGVAA 348	
		:        :  : :        :  :				
Db	248	HSRMRVTSNLVSI	ANQVVDTCCLKGSR	-----DNMSIIIAFP	GAPKPKTEEAIEA 297	
		:        :  : :~        :  :				
RESULT	11					
Q99NF7						
ID	Q99NF7	PRELIMINARY;	PRT;	477 AA.		
AC	Q99NF7;					
DT	01-JUN-2001	(TReMBLrel. 17, Created)				
DT	01-JUN-2001	(TReMBLrel. 17, Last sequence update)				
DT	01-DEC-2001	(TReMBLrel. 19, Last annotation update)				
DE	PROTEIN PHOSPHATASE	1B2 53 KDA ISOFORM.				
GN	PPM1B2.					
OS	Mus musculus	(Mouse).				
OC	Eukaryota; Metazoa; Chordata;	Craniata; Vertebrata; Euteleostomi;				
OC	Mammalia; Eutheria; Rodentia;	Sciurognathi; Muridae; Mus.				
OX	NCBI_TaxID=10090;					
RN	[1]					
RP	SEQUENCE FROM N.A.					
RA	Seroussi E., Shani N., Hayut A., Faier S., Ben-Meir D., Divinski I.,					
RA	Smorodinsky N.I., Lavi S.;					
RT	"Protein phosphatase 1B. Cloning and characterization of two major					
RT	transcripts generated by alternative use of 3' exons."					
RL	Submitted (FEB-2000) to the EMBL/GenBank/DBBJ databases.					
DR	EMBL; AJ271833; CAC28024.1; -.					
DR	HSSP; P35813; 1A6Q.					
DR	InterPro; IPR000222; PP2C.					
DR	InterPro; IPR001932; PP2C_domain.					
DR	Pfam; PF00481; PP2C; 1.					
DR	SMART; SM00332; PP2CC; 1.					
DR	SMART; SM00331; PP2C_SIG; 1.					
DR	PROSITE; PS01032; PP2C; 1.					
SQ	SEQUENCE	477 AA;	52111 MW;	B3943343AEC	AA3E2 CRC64;	
	Query Match	29.4%;	Score 539;	DB 11;	Length 477;	
	Best Local Similarity	33.5%;	Pred. No. 3.1e-35;			
	Matches 124;	Conservative 58;	Mismatches 112;	Indels 76;	Gaps 6;	
QY	1	MGIIYLCSPKTDKTS	EDDENAELRYGLSAMQGW	RDSMEDAHKAILNV	DKNTST-SIFGIFD 59	
		:       ::  :  : : :        :  :  :  :				
Db	1	MGAFLDKPKTEKHN	AHGAGNGLRYGLSSMQG	WRVEMEDAHTAVVGIP	HGLDNWSFFAVYD 60	
		:       ::  :  : : :        :  :  :  :				
QY	60	GHGGLVAKFCAKHL	HQEVLKSEAYAKGD-----	LKASLEYSFLRMD	EMMKA 107	
		::       ::  :  :  :  : : :        :  :				
Db	61	GHAGSRVANYCSTH	LLEHTTNEDFRAADKSG	SALEPVSVKTGIR	TGFLKID EYMRNF 120	
		::       ::  :  :  :  : : :        :  :				
QY	108	SGWKELQSLEETSS	QLDKLGNSSSNAREDD	ESDYAVLTESNDS	NLATKKHKYSDFQ 167	
Db	121	S-----	-----DLRNGM	DRS-----	-----	130
		: :				
QY	168	GPIYGSTAVVALIR	GNKLFVANAGDSRCIM	SRRGAEAVNLSIDHK	PNLEHERKRIESAGGF 227	
		:  :          :  :  :  :				
Db	131	----G	STAVGMVSPTHMYFIN	CGDSRAVLCRNGQVC	FSTQDHKPCNPVERIQ	NAGGS 186
		:  :          :  :  :  :				
QY	228	VHGGRVNGSLNLT	RAIGDMFEKGRPDLPP	DKQVVTCCPDVVE	DLPGDEFIVLACDGIW 287	
		: : :        :  :  :  :				
Db	187	VMIQVRVNSLAVS	RALGDYDKVDGKGPT	EQLVSPPEVYEIV	RAEDEFVVLACDGIW 246	
		: : :        :  :  :  :				
QY	288	DVMSQAVVDFVKS	RLLPTTKTSSLC	EEILDYCLSPTRQ	EQEGCDNMSIIIV----	QPKQ 343
		:  :          :  :  :				
Db	247	DVMSNEELCE	FEVKSRLVSD	DLNVCNVVVDTC	CLKHKGSR-----	DNMSVVLVCF
		: :				



Db	187	VMIQRVNGSLAVSRALGDYDKVCKGPTQQLVSPPEVVEYFILRAEEDFVVLACDGIW	246
QY	288	DVMSSQAVVDVFKSRLPTTKTLSSLCEEILDYCLSPTRQQEGCDNMSIIV----	QPKQ 343
Db	247	DVMSNEELCEFVNSRLEVSDDLNVCNWWVDTCLHKGSR-----	DNMSIVLVCFANAPKV 301
QY	344	SGVA 347	
Db	302	SDEA 305	
RESULT 14			
Q9EQE2		PRELIMINARY;	PRT; 323 AA.
ID	Q9EQE2		
AC	Q9EQE2;		
DT	01-MAR-2001 (TrEMBLrel. 16, Created)		
DT	01-MAR-2001 (TrEMBLrel. 16, Last sequence update)		
DT	01-DEC-2001 (TrEMBLrel. 19, Last annotation update)		
DE	PROTEIN PHOSPHATASE 2C ALPHA 1B.		
GN	PP2CA1B.		
OS	Mus musculus (Mouse).		
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;		
OC	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.		
OX	NCBI_TaxID=10090;		
RN	[1]		
RP	SEQUENCE FROM N.A.		
RA	Cherniack A.D., Nicoloro S.M.C., Buxton J.M., Bose A., Emoto M.,		
RA	Waters S.B., Czech M.P.;		
RT	"Potentiation of Insulin Receptor Signaling by Protein Phosphatase		
RT	2C.";		
RL	Submitted (APR-2000) to the EMBL/GenBank/DBJ databases.		
DR	EMBL; AF259673; AAG44662.1; -.		
DR	HSSP; P35813; 1A6Q.		
DR	InterPro; IPR00222; PP2C.		
DR	InterPro; IPR001932; PP2C_domain.		
DR	Pfam; PF00481; PP2C; 1.		
DR	SMART; SM00332; PP2Cc; 1.		
DR	SMART; SM00331; PP2C_SIG; 1.		
DR	PROSITE; PS01032; PP2C; 1.		
SQ	SEQUENCE 323 AA; 35888 MW; 83B6EF793AE816B9 CRC64;		
Query Match 28.3%; Score 519; DB 11; Length 323;			
Best Local Similarity 33.9%; Pred. No. 7.3e-34;			
Matches 124; Conservative 59; Mismatches 111; Indels 72; Gaps 8;			
QY	1	MGIYLCSPKTDKTSSEDDENAELRYGLSAMQGWDRSMEDAHKAILNVDKNTST-SIFGIFD	59
Db	1	MGAFLDKPKMEKHNAQGGNGLRYGLSSMQGWRVEMEDAHTAVIGLPSGLETWSFFAVYD	60
QY	60	GHGGKLVAKFCAKHLHQEVLKSE-----AYAKGDLKASLEYSFLRMDEMMKGASGWKE	112
Db	61	GHAGSQVAKYCCEHLLDHTNNQDFRGSAGAPSVENVKNGIRTGFLEIDEHMR-----	113
QY	113	LQSLEETSSQLDKLGNSSNAREDDSDYSYAVLTESNDSNLATKKHKYSDFQGGPIYG	172
Db	114	-----VMSE-----KKH-----GADRS	126
QY	173	STAVVALIRGNKLFVANAGDSRCIMSSRRGEAVNLSIDHKPNLEHERKRIESAGGFVHGGR	232
Db	127	STAVGVLI SPQHTYF INCGDSRGLLCRNKRVHFFTTQDHKPSNPLEKERIQNAGGSVMIQR	186
QY	233	VNGSLNLTRAIGDMEFKGRPDLPDQVVTCCPDVVEVDLG-PGDEFIVLACDGIWDVMS	291
Db	187	VNGSLAVSRALGDFDYKCVHGKGPTEQLVSPPEVVDIERSEEDDQFIILACDGIWDVVG	246
QY	292	SQAVVDFVKSRLPTTKTLSSLCEEILDYCLSPTRQQEGCDNMSIIV----	QPKQSGVA 347
Db	247	NEELCDFVRSRLEVTDLDLEKVCNEVVDTCLYKGSR-----DNMSVILICFPSAPKVSAAE	301
QY	348	ASSTD 353	
Db	302	VKKEAE 307	





GenCore version 4.5  
Copyright (c) 1993 - 2000 Compugen Ltd.

OM protein - protein search, using sw model

Run on: June 19, 2002, 08:44:06 ; Search time 13.42 Seconds  
(without alignments)  
1018.480 Million cell updates/sec

Title: US-09-828-302-14  
Perfect score: 1836  
Sequence: 1 MGIYLCSPKTKTSEDDENA.....MSIIIVQPKQSGVAASSTD 353

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 105224 seqs, 38719550 residues  
Total number of hits satisfying chosen parameters: 105224

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : SwissProt\_40.\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	643	35.0	546	1 P2CG_HUMAN	O15355 homo sapien
2	641.5	34.9	542	1 P2CG_MOUSE	O61074 mus musculus
3	641	34.9	543	1 P2CG_BOVIN	P79126 bos taurus
4	635	34.6	370	1 P2C2_SCHPO	O09172 schizosacch
5	616.5	33.6	300	1 P2C_PARTE	P49444 paramecium
6	608.5	33.1	414	1 P2C3_SCHPO	O09173 schizosacch
7	606	33.0	356	1 P2C2_CAEEL	P49596 caenorhabdi
8	555.5	30.3	491	1 P2C1_CAEEL	P49595 caenorhabdi
9	554.5	30.2	464	1 P2C2_YEAST	P39966 saccharomyc
10	539	29.4	390	1 P2CB_MOUSE	P36993 mus musculus
11	538	29.3	479	1 P2CB_HUMAN	O75688 homo sapien
12	537	29.2	387	1 P2CB_BOVIN	O62830 bos taurus
13	537	29.2	468	1 P2C3_YEAST	P34221 saccharomyc
14	534	29.1	390	1 P2CB_RAT	P35815 rattus norv
15	522	28.4	382	1 P2CA_RAT	P20650 rattus norv
16	521	28.4	382	1 P2CA_BOVIN	O62829 bos taurus
17	520	28.3	382	1 P2CA_RABIT	P35814 oryctolagus
18	519	28.3	382	1 P2CA_MOUSE	P49443 mus musculus
19	517	28.2	382	1 P2CA_HUMAN	P35813 homo sapien
20	398.5	21.7	393	1 YBX5_YEAST	P38089 saccharomyc
21	357.5	19.5	423	1 P2C2_ARATH	O04719 arabidopsis
22	354	19.3	434	1 P2C1_ARATH	P49597 arabidopsis
23	350.5	19.1	388	1 P2C3_ARATH	P49599 arabidopsis
24	343.5	18.7	347	1 P2C1_SCHPO	P40371 schizosacch
25	341.5	18.6	281	1 P2C1_YEAST	P35182 saccharomyc
26	334	18.2	399	1 P2C4_ARATH	P49598 arabidopsis
27	326	17.8	406	1 P2C_LEICH	P36982 leishmania
28	298.5	16.3	454	1 P2CH_HUMAN	P49593 homo sapien
29	253	13.8	2493	1 CYAA_USTMA	P49606 ustilago ma
30	247	13.5	1839	1 CYAA_SACKL	P23466 saccharomyc
31	242.5	13.2	449	1 FEM2_CAEEL	P49594 caenorhabdi
32	242.5	13.2	2026	1 CYAA_YEAST	P08678 saccharomyc
33	239	13.0	605	1 P2CD_HUMAN	O15297 homo sapien

RESULT 1				
P2CG_HUMAN				
ID	P2CG_HUMAN	STANDARD;	PRT;	546 AA.
AC	O15355;			
DT	15-JUL-1998 (Rel. 36, Created)			
DT	15-JUL-1998 (Rel. 36, Last sequence update)			
DT	16-OCT-2001 (Rel. 40, Last annotation update)			
DE	Protein phosphatase 2C gamma isoform (EC 3.1.3.16) (PP2C-gamma)			
DE	(Protein phosphatase magnesium-dependent 1 gamma) (Protein phosphatase 1C).			
DE	PPM1G OR PPM1C.			
OS	Homo sapiens (Human).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.			
OX	NCBI_TaxID=9606;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RC	TISSUE=Skeletal muscle;			
RX	MEDLINE=97420453; PubMed=9276438;			
RA	Travis S.M., Welsh M.J.;			
RT	"PP2C gamma: a human protein phosphatase with a unique acidic domain.";			
RL	FEBS Lett. 412:415-419(1997).			
RN	[2]			
RP	SEQUENCE FROM N.A.			
RC	TISSUE=Placenta;			
RA	Strausberg R.;			
RL	Submitted (NOV-2000) to the EMBL/GenBank/DBJ databases.			
CC	- - CATALYTIC ACTIVITY: A PHOSPHOPROTEIN + H(2)O = A PROTEIN + ORTHOPHOSPHATE (THIS ENZYME IS SERINE/THREONINE SPECIFIC).			
CC	- - COFACTOR: BINDS 2 MAGNESIUM OR MANGANESE IONS (BY SIMILARITY).			
CC	- - SUBCELLULAR LOCATION: Cytoplasmic (Potential).			
CC	- - TISSUE SPECIFICITY: WIDELY EXPRESSED. MOST ABUNDANT IN TESTIS, SKELETAL MUSCLE, AND HEART.			
CC	- - SIMILARITY: BELONGS TO THE PP2C FAMILY.			
CC	This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).			
CC				
DR	EMBL; Y13936; CAA74245.1; -.			
DR	EMBL; BC000057; AAH00057.1; -.			
DR	HSSP; P35813; 1A6Q.			
DR	MTM; 605119; -.			
DR	InterPro; IPR000222; PP2C.			
DR	InterPro; IPR001932; PP2C_domain.			
DR	Pfam; PF00481; PP2C; 2.			
DR	SMART; SM00331; PP2C_SIG; 1.			
DR	SMART; SM00332; PP2C; 1.			
DR	PROSITE; PS01032; PP2C; 1.			
KW	Hydrolase; Magnesium; Manganese; Multigene family.			
FT	METAL 40 40 MANGANESE 1 (BY SIMILARITY).			

ALIGNMENTS





















```
P2CB_BOVIN
ID P2CB_BOVIN STANDARD; PRT; 387 AA.
AC O62830;
DT 16-OCT-2001 (Rel. 40, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 16-OCT-2001 (Rel. 40, Last annotation update)
DE Protein phosphatase 2C beta isoform (EC 3.1.3.16) (PP2C-beta).
GN PPM1B.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Retina;
RX MEDLINE=98146173; PubMed=9486768;
RA Klumpp S., Selke D., Fischer D., Baumann A., Mueller F., Thanos S.;
RT "Protein phosphatase type-2C isozymes present in vertebrate retinae:
RT purification, characterization, and localization in photoreceptors.";
RL J. Neurosci. Res. 51:328-338(1998).
CC -!- FUNCTION: ENZYME WITH A BROAD SPECIFICITY.
CC -!- CATALYTIC ACTIVITY: A PHOSPHOPROTEIN + H(2)O = A PROTEIN +
CC ORTHOPHOSPHATE (THIS ENZYME IS SERINE/THREONINE SPECIFIC).
CC -!- COFACTOR: BINDS 2 MAGNESIUM OR MANGANESE IONS (BY SIMILARITY).
CC -!- SUBUNIT: MONOMER (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE PP2C FAMILY.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL Outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (see http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; AJ005458; CAA06555.1; -.
DR HSSP; P35813; 1A60.
DR InterPro; IPR000222; PP2C.
DR InterPro; IPR001932; PP2C_domain.
DR Pfam; PF00481; PP2C; 1.
DR SMART; SM00331; PP2C_SIG; 1.
DR SMART; SM00332; PP2CC; 1.
DR PROSITE; PS01032; PP2C; 1.
KW Hydrolase; Magnesium; Manganese; Multigene family.
FT METAL 37 37 MANGANESE 1 (BY SIMILARITY).
FT METAL 38 38 MANGANESE 1 (BY SIMILARITY).
FT METAL 60 60 MANGANESE 1 AND 2 (BY SIMILARITY).
FT METAL 243 243 MANGANESE 2 (BY SIMILARITY).
FT METAL 286 286 MANGANESE 2 (BY SIMILARITY).
SQ SEQUENCE 387 AA; 42834 MW; D70B95141250FFB1 CRC64;

Query Match 29.2%; Score 537; DB 1; Length 387;
Best Local Similarity 34.9%; Pred. No. 2.4e-34;
Matches 129; Conservative 56; Mismatches 109; Indels 76; Gaps 7;

QY 1 MGIYLCSPKTDKTSDDENAEELRYGLSAMQGWDRSDMEDAHKAILNVDKNTST-SIFGIFD 59
   || || || || : |||||:||||| ||||| ||||| : : || || ||
Db 1 MGAFLDKPKTEKHNAHGAGNGLRYGLSSMQGWVRVEDAHTAVVGIPHGLEDWSFFAVYD 60
   || || || || : : || || || || || || || || || || || || || ||
QY 60 GHGCKLVAKFCAKHLHQEVLKSEAY-AKGDCLKASLEYS-----FLRDEMMKGA 107
   || || || || : || : || : || : || : || : || : || : || : ||
Db 61 GHAGSRVANYCSTHLLLEHITNNEDFRAAGKSGSALEPFSVENKNGIRTGFLKID EYMRNF 120
   || || || || : || || || || || || || || || || || || || || ||
QY 108 SGWKELOSLEETSSQLDKLGNNGSSSNAREDDDESYSYAVLTESNDSNLATKKHKYSDFQ 167
   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 121 S-----DLRNGMDRS----- 130
QY 168 GPIYGSTAVVALIRGNKLFVANAGDSRCIMSRRGGAVNLSIDHKPNLEHERKRRIESAGGF 227
   ||||| : || : || || || || || || || || || || || || || || ||
Db 131 ----GSTAVGVMI SPKHIYFINGGDSRAVLYRSGQVCFSTQDHKPCNPREKERIQNAGGS 186
```

```
QY 228 VHGRVNGSLNLTRAIGDMEFKGRPDLPPDKQVVTCCPDVVEVDLPGDDEFIVLACDGIW 287
   | ||||| :|||:| | :| | | :| :| | :| :| | | | | | | | | | |
Db 187 VMIQRVNGSLAVSRALGDYDYKCVDGKGPTQLVSPPEVVEYILRAEDEFIILACDGIW 246
   VMSQQAVVDFVKSRLPPTTKTLSSLCEEILDYCLSPTRRQQEGCDNMSIIV----QPKQ 343
   ||||| : :||| || | :| :| :| :| | :| | ||||| :|
Db 247 DVMSNEELCEFEVKSRLVSDDLLENVCNVWVDTCCLKGSR-----DNMSIVLVCFSNAPKV 301
   | | | | |
QY 344 SGVAASSTD 353
   | | : :
Db 302 SDEAMRKDSE 311

RESULT 13
P2C3_YEAST
ID P2C3_YEAST STANDARD; PRT; 468 AA.
AC P34221; Q92330;
DT 01-FEB-1994 (Rel. 28, Created)
DT 01-FEB-1994 (Rel. 28, Last sequence update)
DT 01-NOV-1997 (Rel. 35, Last annotation update)
DE Protein phosphatase 2C homolog 3 (EC 3.1.3.16) (PP2C-3).
GN PTC3 OR YBL056W OR YBL0511 OR YBL0513
OS Saccharomyces cerevisiae (Baker's yeast).
OC Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
OC Saccharomycetales; Saccharomycetaceae; Saccharomycetes.
OX NCBI_TaxID=4932;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=S288C;
RX MEDLINE=94205266; PubMed=8154187;
RA Scherens B., el Bakkoury M., Vierendeels F., Dubois E., Messenguy F.;
RT "Sequencing and functional analysis of a 32,560 bp segment on the
RT left arm of yeast chromosome II. Identification of 26 open reading
RT frames, including the KIP1 and SEC17 genes.";
RL Yeast 9:1355-1371(1993).
RN [2]
RP SEQUENCE FROM N.A.
RA Maeda T., Wurlger-Murphy S.M., Saito H.;
RL Submitted (SEP-1996) to the EMBL/Genbank/DBJ databases.
CC -!- CATALYTIC ACTIVITY: A PHOSPHOPROTEIN + H(2)O = A PROTEIN +
CC ORTHOPHOSPHATE (THIS ENZYME IS SERINE/THREONINE SPECIFIC).
CC -!- COFACTOR: BINDS 2 MAGNESIUM OR MANGANESE IONS (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE PP2C FAMILY.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; Z23261; CAA80791.1; -.
DR EMBL; Z35817; CAA84876.1; -.
DR EMBL; U72346; AAB17351.1; -.
DR PIR; S39832; S39832.
DR PIR; S37333; S37333.
DR HSSP; P35813; 1A6Q.
DR SGD; S0000152; PTC3.
DR InterPro; IPR000222; PP2C.
DR InterPro; IPR001932; PP2C_domain.
DR Pfam; PF00481; PP2C; 1.
DR SMART; SM00331; PP2C_SIG; 1.
DR SMART; SM00332; PP2CC; 1.
DR PROSITE; PS01032; PP2C; 1.
KW Hydrolase; Magnesium; Manganese; Multigene family.
FT METAL 37 37 MANGANESE 1 (BY SIMILARITY).
FT METAL 38 38 MANGANESE 1 (BY SIMILARITY).
FT METAL 62 62 MANGANESE 1 AND 2 (BY SIMILARITY).
FT METAL 234 234 MANGANESE 2 (BY SIMILARITY).
FT METAL 284 284 MANGANESE 2 (BY SIMILARITY).
FT CONFLICT 369 369 D -> G (IN REF. 2).
SQ SEQUENCE 468 AA; 51390 MW; DC5C18053828DC0D CRC64;
```

Query Match 29.2%; Score 537; DB 1; Length 468;  
Best Local Similarity 38.8%; Pred. No. 3e-34;  
Matches 135; Conservative 38; Mismatches 109; Indels 66; Gaps 9;

QY 1 MGIYLCSPKTKTSEDDENAELRYGLSAMQGWDRSDMEDAH---KAILNVDKNTSTSIIFI 57  
DB 1 MGQILSNPIIDKEHHSCTDLTAFLGCMQGWWRMSMEDAHIVPNLLAESDEEHLAFYGI 60

QY 58 FDGHGKLVAKFCACKHLHQLKSEAYAKGDLKASLEYSFLRMD-EMMKGASGWKELQSL 116  
DB 61 FDGHGSSVAEFCGSKMISILKKQESFKSGMLEQCLIDTFLATDVLELKD----- 110

QY 117 EETSSQLDKLNGNSSNAREDDSDYSYAVLTESNDSNLATKKHKYSDFQGPIYGSTAV 176  
DB 111 -----EKL-----KDDHS-----GCTAT 123

QY 177 VALIRGNK--LFVANAGSRCIMSRGGEAVNLSIDHKPNLEHERKKRIESAGGFVHGGRVN 234  
DB 124 VILVSQLKLLICANSRSTVLTSGNSKAMSFDPKPTLLSEKSRIVAADGFVEMDRVN 183

QY 235 GSLNLTFRAGDMEFKGRPDLPDPKQVVTCCPDVVEVDLG-PGDEFIVLACDGIWDMSSQ 293  
DB 184 GNLSLSRAIGDFEFKSNKLGPHQVVTCPDILCHNLNYDEDEFEVILLACDGIWDCLTQ 243

QY 294 AVVDENKSRRLPT-TKTLSSLCEEILDYCLSPTRQGE-GCDNMSIIV 339  
DB 244 ECVDLVHYGISQGNMTLSDISSRIVDVCCSPTEGSGIGCDNMSISIV 291

RESULT 14  
P2CB\_RAT  
ID P2CB\_RAT STANDARD; PRT; 390 AA.  
AC P35815; Q64046;  
DT 01-JUN-1994 (Rel. 29, Created)  
DT 01-JUN-1994 (Rel. 29, Last sequence update)  
DT 16-OCT-2001 (Rel. 40, Last annotation update)  
DE Protein phosphatase 2C beta isoform (EC 3.1.3.16) (PP2C-beta) (IA)  
DE (Protein phosphatase 1B).  
GN PPM1B OR PPM1B OR PP2C2.  
OS Rattus norvegicus (Rat).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.  
OX NCBI\_TaxID=10116;  
[1]  
SEQUENCE FROM N.A. (ISOFORM BETA-1).  
RP TISSUE=Liver;  
RC MEDLINE=92201367; PubMed=1312947;  
RX Wenk J., Trompeter H.-I., Pettrich K.-G., Cohen P.T.W., Campbell D.G.,  
RA Mieskes G.;  
RT "Molecular cloning and primary structure of a protein phosphatase 2C  
RT isoform.";  
RL FEBS Lett. 297:135-138(1992).  
[2]  
SEQUENCE FROM N.A.  
RP TISSUE=Brain;  
RC MEDLINE=95169115; PubMed=7532404;  
RX Schafer K., Braun T.;  
RA "Monoclonal anti-FLAG antibodies react with a new isoform of rat Mg2+  
RT dependent protein phosphatase beta.";  
RL Biochem. Biophys. Res. Commun. 207:708-714(1995).  
CC -!- FUNCTION: ENZYME WITH A BROAD SPECIFICITY.  
CC -!- CATALYTIC ACTIVITY: A PHOSPHOPROTEIN + H(2)O = A PROTEIN +  
CC ORTHOPHOSPHATE (THIS ENZYME IS SERINE/THREONINE SPECIFIC).  
CC -!- COFACTOR: BINDS 2 MAGNESIUM OR MANGANESE IONS (BY SIMILARITY).  
CC -!- SUBUNIT: MONOMER (BY SIMILARITY).  
CC -!- ALTERNATIVE PRODUCTS: A NUMBER OF ISOFORMS SUCH AS BETA-1 (SHOWN  
CC HERE) AND BETA-MPP ARE PRODUCED BY ALTERNATIVE SPLICING. THEY ONLY  
CC DIFFER IN THEIR C-TERMINUS.  
CC -!- SIMILARITY: BELONGS TO THE PP2C FAMILY.  
CC -----  
CC This SWISS-PROT entry is copyright. It is produced through a collaboration

CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
CC the European Bioinformatics Institute. There are no restrictions on its  
CC use by non-profit institutions as long as its content is in no way  
CC modified and this statement is not removed. Usage by and for commercial  
CC entities requires a license agreement (See <http://www.isb-sib.ch/announce/>  
CC or send an email to [license@isb-sib.ch](mailto:license@isb-sib.ch)).  
CC -----  
CC EMBL; S90449; AAB21898.1; -;  
DR EMBL; S74572; AAB33430.1; -;  
DR PIR; S20392; S20392.  
DR HSP; P35813; IA6Q.  
DR InterPro; IPR000222; PP2C.  
DR InterPro; IPR001932; PP2C\_domain.  
DR Pfam; PF00481; PP2C; 1.  
DR SMART; SM00331; PP2C\_SIG; 1.  
DR SMART; SM00332; PP2C; 1.  
DR PROSITE; PS01032; PP2C; 1.  
KW Hydrolase; Magnesium; Manganese; Multigene family;  
KW Alternative splicing.  
FT METAL 37 37 MANGANESE 1 (BY SIMILARITY).  
FT METAL 38 38 MANGANESE 1 (BY SIMILARITY).  
FT METAL 60 60 MANGANESE 1 AND 2 (BY SIMILARITY).  
FT METAL 243 243 MANGANESE 2 (BY SIMILARITY).  
FT METAL 286 286 MANGANESE 2 (BY SIMILARITY).  
FT VARSPLIC 379 390 GAGDLEDSLVAL -> FYQSPSTPYSDNVSYEWOT (IN  
FT ISOFORM BETA-MPP).  
SQ SEQUENCE 390 AA; 42889 MW; D147615BC2FA140B CRC64;  
  
Query Match 29.1%; Score 534; DB 1; Length 390;  
Best Local Similarity 34.3%; Pred. No. 4.1e-34;  
Matches 125; Conservative 54; Mismatches 109; Indels 76; Gaps 6;

QY 1 MGIYLCSPKTKTSEDDENAELRYGLSAMQGWDRSDMEDAHKAILNVDKNTST-SIFGIFD 59  
DB 1 MGAFLDKPKTEKHNAHGAGNGLRYGLSSMQGWRVEMEDAHTAVVGIPHGLEDWSFFAVYD 60

QY 60 GHGGKLVAKFCACKHLHQLKSEAYAKGD-----LKASLEYSFLRMDMMKGA 107  
DB 61 GHAGSRVANVCSTHLEHITTNEDFRAADKSGFALEPSVENVKTGIRTGFLKIDEXMRNF 120

QY 108 SGWKELOSLETSQDKLNGNSSNAREDDSDYSYAVLTESNDSNLATKKHKYSDFQ 167  
DB 121 S-----DLRNGMDRS----- 130

QY 168 GPIYGSTAVVALIRGNKLFVANAGDSRCIMSRGGEAVNLSIDHKPNLEHERKKRIESAGGF 227  
DB 131 ----GSTAVGVMSPTHIYFINGDSRAVLCRNGQVCFSTQDHPKPCNPMKEKRIQNAGGS 186

QY 228 VHGRVNGSLNLTFRAGDMEFKGRPDLPDPKQVVTCCPDVVEVDLPGDDEFIVLACDGIW 287  
DB 187 VMIQRVNGSLAVSRAIGDYDYKCVDGKGPTQLVSPPEVYEILRAEEDFVVLACDGIW 246

QY 288 DVMSSQAVVDFVKSRLPTTKTLSSLCEEILDYCLSPTRQGECDNMSIIV---QPKQ 343  
DB 247 DVMSNEELCEFVNSRLEVSDDLENVCNVWVVDTCCLKGSR-----DNMSIVLVCFANAPKV 301

QY 344 SGVA 347  
DB 302 SDEA 305

RESULT 15  
P2CA\_RAT  
ID P2CA\_RAT STANDARD; PRT; 382 AA.  
AC P20650;  
DT 01-FEB-1991 (Rel. 17, Created)  
DT 01-FEB-1991 (Rel. 17, Last sequence update)  
DT 15-JUL-1999 (Rel. 38, Last annotation update)  
DE Protein phosphatase 2C alpha isoform (EC 3.1.3.16) (PP2C-alpha) (IA)  
DE (Protein phosphatase 1A).  
GN PPM1A OR PPM1A OR PP2C1.  
OS Rattus norvegicus (Rat).







GenCore version 4.5  
Copyright (c) 1993 - 2000 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: June 19, 2002, 08:42:46 ; Search time 20.94 Seconds  
(without alignments)  
1619.844 Million cell updates/sec

Title: US-09-828-302-14  
Perfect score: 1836  
Sequence: 1 MGIYLCSPKTDKTSDDENA.....MSIIIVQPKQSGVAASSTD 353

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283138 seqs, 96089334 residues  
Total number of hits satisfying chosen parameters: 283138

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000  
Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : PIR\_71:\*  
1: pir1:\*  
2: pir2:\*  
3: pir3:\*  
4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description
1	973	53.0	357	2 T06308	protein phosphatas
2	967	52.7	355	2 H84643	probable protein p
3	635	34.6	370	2 S54297	protein phosphatas
4	616.5	33.6	300	2 A55804	phosphoprotein pho
5	608.5	33.1	414	2 S62462	protein phosphatas
6	606	33.0	348	2 E88434	protein T23F11.1 I
7	606	33.0	356	2 T25181	hypothetical prote
8	555.5	30.3	491	2 T16354	hypothetical prote
9	554.5	30.2	464	2 S50592	hypothetical prote
10	539	29.4	390	2 S65672	phosphoprotein pho
11	539	29.4	393	2 I49016	phosphoprotein pho
12	537	29.2	468	2 S39832	probable phosphopr
13	534	29.1	390	2 S20392	phosphoprotein pho
14	534	29.1	397	2 JC2524	phosphoprotein pho
15	522	28.4	382	2 A32399	phosphoprotein pho
16	520	28.3	382	2 S22422	phosphoprotein pho
17	519	28.3	382	2 I53823	magnesium dependen
18	517	28.2	382	2 S22423	phosphoprotein pho
19	505.5	27.5	468	2 T21331	hypothetical prote
20	457	24.9	920	2 T08853	protein phosphatas
21	415.5	22.6	380	2 E84748	probable protein p
22	403.5	22.0	361	2 T45778	protein phosphatas
23	401.5	21.9	392	2 F84650	probable protein p
24	398.5	21.7	393	2 S48288	probable phosphopr
25	363.5	19.8	442	2 B86209	protein F22G5.22 I
26	358	19.5	348	2 T50783	protein phosphatas
27	357	19.4	362	2 F84695	probable protein p
28	355	19.3	511	2 F96752	protein phosphatas
29	354.5	19.3	359	2 T52337	phosphoprotein pho

30	354	19.3	434	2 T04263	phosphoprotein pho
31	353.5	19.3	396	2 T02483	probable protein p
32	350.5	19.1	388	2 C85323	protein phosphatas
33	346.5	18.9	386	2 T09019	phosphoprotein pho
34	346.5	18.9	389	2 T05095	hypothetical prote
35	343.5	18.7	347	2 A56058	phosphoprotein pho
36	341.5	18.6	281	2 S41854	phosphoprotein pho
37	334	18.2	399	2 S55457	phosphoprotein pho
38	330	18.0	405	2 F86206	hypothetical prote
39	327	17.8	383	2 T48018	hypothetical prote
40	326.5	17.8	381	2 T09640	protein phosphatas
41	326	17.8	406	2 A47492	phosphoprotein pho
42	325	17.7	464	2 H96700	protein F12A21.5 I
43	324.5	17.7	975	2 T08606	protein phosphatas
44	315.5	17.2	390	2 C84826	protein phosphatas
45	314	17.1	404	2 T00750	probable protein p

ALIGNMENTS

RESULT 1  
T06308  
protein phosphatase 2C homolog F11C18.60 - Arabidopsis thaliana  
C;Species: Arabidopsis thaliana (mouse-ear cress)  
C;Date: 30-Apr-1999 #sequence\_revision 30-Apr-1999 #text\_change 15-Jun-2001  
C;Accession: T06308  
R;Bevan, M.; Terry, N.; Ardiles, W.; Buysshaert, C.; Dasseville, R.; De Clerck, R.;  
ewes, H.W.; Mayer, K.F.X.; Schueller, C.  
submitted to the Protein Sequence Database, April 1999  
A;Reference number: Z15589  
A;Accession: T06308  
A;Molecule type: DNA  
A;Residues: 1-357 <BEV>  
A;Cross-references: EMBL:AL049607; GSPDB:GN00062; ATSP:F11C18.60  
A;Experimental source: cultivar Columbia; BAC clone F11C18  
C;Genetics:  
A;Gene: ATSP:F11C18.60  
A;Map position: 4  
A;Introns: 39/3; 61/1; 97/2; 148/3; 190/3; 232/1; 257/3; 275/2; 293/3  
C;Superfamily: human phosphoprotein phosphatase 1a

Query Match	53.0%;	Score 973;	DB 2;	Length 357;
Best Local Similarity	55.3%;	Pred. No. 1.2e-70;		
Matches 192;	Conservative 55;	Mismatches 78;	Indels 22;	Gaps 3;
QY	1	MGIYLCSPKTDKTSDDENAELRYGLSAMQWRDSMEDAHKAILNVDKNTSTSI	FGFDG	60
Db	1	MGIYLTPTKTDKFSDEGENHKRLRYGLSSMQWRASMEDAHAAILDLDN--TS	FLGVYDG	58
QY	61	HGKGLVAKFCAKHLHQEVLKSEAYAKGDLKASLEYSFRLRMDMMKGASGWKEL	QSLSEETS	120
Db	59	HGKGVVSKFCAKYLHQQVLSDEAYAAGDVGTSIQKAFFRMDMMQQRGWRELAV	LGDKI	118
QY	121	SQLDKLGNG-----NSSSNAREDESYSYAVLTESNDSNLATKKHKYSDFQ	GPIYGSTA	175
Db	119	NKFSGMIEGLIWSPRSGDSANKPDA-----WAFEEGPHSDFAGPNSGSTA	163	
QY	176	VVALIRGNKLFVANAGDSRCIMSRERGEAVNLSIDHKPNLEHERKRIESAGGFV	HGGRVNG	235
Db	164	CVAVVRDKQLFVANAGDSRCVISRKNQAYNLSRDHKPDLEAEKERILKAGGFI	HAGRVNG	223
QY	236	SLNLTRAIGDMEFKRPDLPPDKQVVTCCPDVVEVDLPGDDEFIVLACDGIWDM	SSQAV	295
Db	224	SLNLSRAIGDMEFKQNKFLPSEKQIVTASPDVNTVELCDDDDDFVLACDGIW	DCMTSQQL	283
QY	296	VDFVKSRLPTTKTTLSSLCEEILDYCLSPTRQOEGCDNMSIIIVQPK	342	
Db	284	VDFIHEQLNSETKLSVCEKVLDRCLAPNTSGEGCDNMTMILVRFK	330	

RESULT 2

















QY	288	DVMSSQAVVDFVKSRLLPTTKTLSSLCEEILDYCLSPTRRQEGCDNMSIIIV----	QPKQ	343
Db	247	DVMSNEELCEFNRSRLEVSDDLENVCNWVVDTCCLKGSR-----	DNMSIVLCFANAPKV	301
QY	344	SGVA	347	
Db	302	SDEA	305	
RESULT 15				
A32399				
phosphoprotein phosphatase (EC 3.1.3.16) 1A - rat				
N;Alternate names: protein phosphatase 2C				
C;Species: Rattus norvegicus (Norway rat)				
C;Date: 31-Jul-1989 #sequence_revision 31-Jul-1989 #text_change 15-Jun-2001				
C;Accession: A32399				
R;Tamura, S.; Lynch, K.R.; Larner, J.; Fox, J.; Yasui, A.; Kikuchi, K.; Suzuki, Y.; Tsui				
Proc. Natl. Acad. Sci. U.S.A. 86, 1796-1800, 1989				
A;Title: Molecular cloning of rat type 2C (IA) protein phosphatase mRNA.				
A;Reference number: A32399; MUID:89184515				
A;Accession: A32399				
A;Status: preliminary				
A;Molecule type: mRNA				
A;Residues: 1-382 <TAM>				
A;Cross-references: GB:J04503; NID:g206312; PIDN:AAA41917.1; PID:g206313				
C;Superfamily: human phosphoprotein phosphatase 1A				
C;Keywords: liver; phosphoric monoester hydrolase; serine/threonine-specific phosphatase				
Query Match 28.4%; Score 522; DB 2; Length 382;				
Best Local Similarity 34.1%; Pred. No. 2.7e-34;				
Matches 125; Conservative 59; Mismatches 109; Indels 74; Gaps 9;				
QY	1	MGIIYLCSPKTDKTSSEDDENAELRYGLSAMQWRDSMEDAHKAILNVDKNTSP-SIFGIFD	59	
Db	1	MGAFLDKPKMEKHNAQGGNGRLRYGLSSMQWRVEMEDAHTAVIGLPSGLETSFFAVYD	60	
QY	60	GHGGKLVAKFCAKHLHQEVLKSEAYAKG-----DLKASLEYSFLRMDMMKGASGWK	111	
Db	61	GHAGSQVAKYCEEHLDDHITNNQDF-KGSAGAPSVENVKNGIRTGFLIDEHMR-----	113	
QY	112	ELQSLEETSSQLDKLGNNGNSSNAREDDSDYSYAVLTESNDSNLATKKHKYSDFQGPIY	171	
Db	114	-----VMSE-----KKH-----GADRS	125	
QY	172	GSTAVVALIRGNKLFVANAGDSRCIMSRERGEAVNLSIDHKPNLEHERKRIESAGGFVHGG	231	
Db	126	GSTAVGLISPOHTYFINCDSRGLLCRNRRKVHFFTDQHKPSNPLEKERIQNAGGSVMIQ	185	
QY	232	RVNGSLNLTRAIGDMEFKGRPDLPPDKQVVTCCPDVVEVDLG-PGDEFIVLACDGIWDVM	290	
Db	186	RVNGSLAVSRALGDFDYKCVHGKGTEQLVSPPEVVDIERSEEDDQFIILACDGIWDVM	245	
QY	291	SSQAVVDFVKSRLLPTTKTLSSLCEEILDYCLSPTRRQEGCDNMSIIIV----	QPKQSGV	346
Db	246	GNEELCDFVRSRLEVTDLDLEKVCNEVVDTCLYKGSR-----	DNMSVILICFPNAPKVS	300
QY	347	AASSTD	353	
Db	301	AVKKEAE	307	



GenCore version 4.5  
Copyright (c) 1993 - 2000 Compugen Ltd.

OM protein - protein search, using sw model

Run on: June 19, 2002, 08:41:40 ; Search time 13.29 Seconds  
(without alignments)  
648.776 Million cell updates/sec

Title: US-09-828-302-14  
Perfect score: 1836  
Sequence: 1 MGIYLCSPKTDKTSEDDENA.....MSLIIVQPKQSGVAASSTD 353

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 231628 seqs, 24425594 residues

Total number of hits satisfying chosen parameters: 231628

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued\_Patents\_AA:\*  
1: /cgn2\_6/ptodata/2/iaa/5A\_COMB.pep:\*  
2: /cgn2\_6/ptodata/2/iaa/5B\_COMB.pep:\*  
3: /cgn2\_6/ptodata/2/iaa/6A\_COMB.pep:\*  
4: /cgn2\_6/ptodata/2/iaa/6B\_COMB.pep:\*  
5: /cgn2\_6/ptodata/2/iaa/PCTUS\_COMB.pep:\*  
6: /cgn2\_6/ptodata/2/iaa/backfiles1.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	643	35.0	546	3	US-08-935-855-20 Sequence 20, Appl
2	641.5	34.9	542	3	US-08-935-855-22 Sequence 22, Appl
3	538	29.3	478	2	US-08-873-093-1 Sequence 1, Appl
4	538	29.3	478	2	US-08-873-093-4 Sequence 4, Appl
5	534	29.1	390	2	US-08-873-093-3 Sequence 3, Appl
6	533.5	29.1	309	2	US-08-822-701-7 Sequence 7, Appl
7	533.5	29.1	309	3	US-08-935-855-7 Sequence 7, Appl
8	520	28.3	306	2	US-08-822-701-8 Sequence 8, Appl
9	520	28.3	306	3	US-08-935-855-8 Sequence 8, Appl
10	491.5	26.8	392	2	US-08-822-701-2 Sequence 2, Appl
11	491.5	26.8	392	3	US-08-935-855-2 Sequence 2, Appl
12	370.5	20.2	392	4	US-09-013-881-2 Sequence 2, Appl
13	341.5	18.6	281	2	US-08-822-701-9 Sequence 9, Appl
14	341.5	18.6	281	3	US-08-935-855-9 Sequence 9, Appl
15	326	17.8	314	2	US-08-822-701-10 Sequence 10, Appl
16	326	17.8	314	3	US-08-935-855-10 Sequence 10, Appl
17	156.5	8.5	504	2	US-08-752-891-2 Sequence 2, Appl
18	156.5	8.5	504	2	US-08-752-891-6 Sequence 6, Appl
19	156.5	8.5	504	2	US-09-144-178-2 Sequence 2, Appl
20	156.5	8.5	504	2	US-09-144-178-6 Sequence 6, Appl
21	156.5	8.5	504	4	US-09-406-854-2 Sequence 2, Appl
22	156.5	8.5	504	4	US-09-406-854-6 Sequence 6, Appl
23	97.5	5.3	15281	2	US-08-471-119A-2 Sequence 2, Appl
24	90	4.9	707	2	US-08-949-941B-2 Sequence 2, Appl
25	89	4.8	802	2	US-08-007-107-4 Sequence 4, Appl
26	88.5	4.8	1477	1	US-08-038-682-4 Sequence 4, Appl
27	88.5	4.8	1477	1	US-08-302-832-4 Sequence 4, Appl

28	88.5	4.8	1477	2	US-08-530-198-4	Sequence 4, Appl
29	88.5	4.8	1477	2	US-08-469-880-4	Sequence 4, Appl
30	88.5	4.8	1477	2	US-08-728-470-4	Sequence 4, Appl
31	88.5	4.8	1477	2	US-08-617-697-4	Sequence 4, Appl
32	88.5	4.8	1477	4	US-08-719-641-4	Sequence 4, Appl
33	88.5	4.8	2285	4	US-09-308-375-2	Sequence 2, Appl
34	88	4.8	3111	2	US-08-460-309-4	Sequence 4, Appl
35	88	4.8	3111	2	US-08-125-077-4	Sequence 4, Appl
36	88	4.8	3898	4	US-08-750-717-2	Sequence 2, Appl
37	86	4.7	3898	2	US-08-876-991-2	Sequence 2, Appl
38	86	4.7	3898	2	US-09-059-853-2	Sequence 2, Appl
39	84	4.6	793	1	US-08-188-228-54	Sequence 54, Appl
40	84	4.6	793	1	US-08-332-643-48	Sequence 48, Appl
41	84	4.6	793	1	US-08-332-638-54	Sequence 54, Appl
42	83	4.5	484	1	US-08-030-096-8	Sequence 8, Appl
43	82	4.5	546	2	US-08-942-423-4	Sequence 4, Appl
44	82	4.5	546	4	US-08-630-915A-14	Sequence 14, Appl
45	82	4.5	687	2	US-08-540-804-4	Sequence 4, Appl

ALIGNMENTS

RESULT 1  
US-08-935-855-20  
; Sequence 20, Application US/08935855  
; Patent No. 6066485  
; GENERAL INFORMATION:  
; APPLICANT: Guthridge, Mark  
; APPLICANT: Basilio, Claudio  
; TITLE OF INVENTION: NOVEL GROWTH FACTOR INDUCIBLE  
; TITLE OF INVENTION: SERINE/THREONINE PHOSPHATASE, FIN13  
; NUMBER OF SEQUENCES: 22  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: David A. Jackson, Esq.  
; STREET: 411 Hackensack Ave, Continental Plaza, 4th  
; STREET: Floor  
; CITY: Hackensack  
; STATE: New Jersey  
; COUNTRY: USA  
; ZIP: 07601  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/935,855  
; FILING DATE:  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Jackson Esq., David A.  
; REGISTRATION NUMBER: 26,742  
; REFERENCE/DOCKET NUMBER: 1049-1-002 CIP  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 201-487-5800  
; TELEFAX: 201-343-1684  
; INFORMATION FOR SEQ ID NO: 20:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 546 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; HYPOTHETICAL: NO  
; ORIGINAL SOURCE:  
; ORGANISM: Homo sapiens  
; US-08-935-855-20

Query Match 35.0%; Score 643; DB 3; Length 546;  
Best Local Similarity 32.7%; pred. NO. 9.3e-61;  
Matches 165; Conservative 60; Mismatches 112; Indels 168; Gaps 9;



```

; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/873,093
; FILING DATE: Filed Herewith
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Billings, Lucy J.
; REGISTRATION NUMBER: 36,749
; REFERENCE/DOCKET NUMBER: PF-0319 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-855-0555
; TELEFAX: 415-845-4166
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: ~478 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; IMMEDIATE SOURCE:
; LIBRARY: THPIPLB01
; CLONE: 13177
; US-08-873-093-1

```

Query Match 29.3%; Score 538; DB 2; Length 478;  
Best Local Similarity 34.6%; Pred. NO. 1.7e-49;  
Matches 128; Conservative 57; Mismatches 109; Indels 76; Gaps 7;

QY	1	MGIYLCSPKTDKTSEDDENAELRYGLSAMQGWDRSMEDAHKAILNVDKNTST-SIFGIFD	59
Dd	1	MGAFLDKPTEKHNAHGAGNGLRYGLSSMQGWVRVEMEDAHTAVVGIPHGLEDSWSTFAVD	60
QY	60	GHGGKLYAKFCAKHLHQEVLKSEAY-AKGDLKASLEYS-----FLRMDENMKGA	107
Dd	61	GHAGSRVANVCSTHLLHEIITTNEDFRAAGKSGSALELSVENVKNGIRTGFLKIDEYMRNF	120
QY	108	SGWKELQSLEETSSQLDKLGNNGSSSNAREDDSDSYAVLTESNDSNLATKKHKYSDFQ	167
Dd	121	S-----DLRNGMDRS-----	130
QY	168	GPIYGSTAVVALIRGNKLFFVANAGDSRCIMSRRGAEAVNLSDHKPNLEHERKRRIESAGGF	227
Dd	131	----GSTAVGVMI\$PKHIYFINCGDSRAVLYRNGQVCFSTQDHKPCNPREKERIQNAGGS	186
QY	228	VHGGRVNGSLNLTIRAIGDMFEFKGRPDLPPDKQVVTCPPDVVEVDLPGDEFIVLACDGIW	287
Dd	187	VMIQRVNGSLAVSRALGDYDYKCVDGKGPTSQLVSPEPEVYEILRAEEDEFIILACDGIW	246
QY	288	DVMSSQAVVDFVKSRLPPTTKTLSSLCEIEILDYCLSPTRQOEGCDNM\$IIIV---QpKQ	343
Dd	247	DVMSNEELCEYVKSRLLEVSDDL\$ENVCNWVVDTCLHKGSR-----DNMSIVLVCF\$SNAPKV	301
QY	344	SGVAASSSTD	353
Dd	302	SDEAVKKDSE	311

RESULT 4  
US-08-873-093-4  
; Sequence 4, Application US/08873093  
; Patent No. 5853997  
; GENERAL INFORMATION:  
; APPLICANT: Bandman, Olga  
; APPLICANT: Goli, Surya K.  
; APPLICANT: Lal, Preeti  
; APPLICANT: Corley, Neil C.  
; APPLICANT: Zhang, Hong  
; TITLE OF INVENTION: NEW PROTEIN PHOSPHATASE

```

;
; NUMBER OF SEQUENCES: 4
;
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Incyte Pharmaceuticals, Inc.
; STREET: 3174 Porter Drive
; CITY: Palo Alto
; STATE: CA
; COUNTRY: USA
; ZIP: 94304
;
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/873,093
; FILING DATE: Filed Herewith
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
;
; ATTORNEY/AGENT INFORMATION:
; NAME: Billings, Lucy J.
; REGISTRATION NUMBER: 36,749
; REFERENCE/DOCKET NUMBER: PF-0319 US
;
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-855-0555
; TELEFAX: 415-845-4166
;
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 478 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; IMMEDIATE SOURCE:
; LIBRARY: GenBank
; CLONE: 1452526
;
; US-08-873-093-4

```

Query Match	29.3%;	Score 538;	DB 2;	Length 478;
Best Local Similarity	34.6%;	Pred. No. 1.7e-49;		
Matches 128; Conservative	57;	Mismatches 109;	Indels 76;	Gaps 7;

[illegible]

RESULT 5  
US-08-873-093-3







Db 61 GHAGSQVAKYCCHEHLLDHTNNQDF-KGSAGAPSVENVKNGIRTGFEIDEHMR----- 113

QY 112 ELQSLEETSSQLDKLGNNGSSNAREDDSDYSYAVLTESNDSNLATKKHKYSDFQGPY 171

Db 114 -----VMSE-----KKH-----GADRS 125

QY 172 GSTAVVALIRGNKLFVANAGDSRCIMSRGAEAVNLSIDHKPNLEHERKRIESAGGFVHGG 231

Db 126 GSTAVGVLLISPOHTYFINGCDSRGLLCNRNKKVHFFTDQHKPSNPLEKERIQNAGGSVMIQ 185

QY 232 RVNGSLNLTRAIGDMEFKGRPDLPDPKQVVTCCPDVVEVDLG-PGDEFIVLACDGIWDVM 290

Db 186 RVNGSLAVSRALGDFDYKCVHGKPTQLVSPPEVHDIERSEEDDQFIILACDGIWDVM 245

QY 291 SSQAVVDFVKSRLPTTKTSSLCEEILDYCLSPTRQQEGCDNMSIIV----QPKQSGV 346

Db 246 GNEELCDFVRSRLVTDDELEKVCNEVVDTCLYKGSR-----DNMSVILICFPNAPKVSAAE 300

QY 347 A 347

Db 301 A 301

RESULT 9

US-08-935-855-8

; Sequence 8, Application US/08935855

; Patent No. 6066485

; GENERAL INFORMATION:

; APPLICANT: Guthridge, Mark

; APPLICANT: Basilico, Claudio

; TITLE OF INVENTION: NOVEL GROWTH FACTOR INDUCIBLE

; TITLE OF INVENTION: SERINE/THREONINE PHOSPHATASE, FIN13

; NUMBER OF SEQUENCES: 22

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: David A. Jackson, Esq.

; STREET: 411 Hackensack Ave, Continental Plaza, 4th

; STREET: Floor

; CITY: Hackensack

; STATE: New Jersey

; COUNTRY: USA

; ZIP: 07601

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/935,855

; FILING DATE:

; CLASSIFICATION: 435

; ATTORNEY/AGENT INFORMATION:

; NAME: Jackson Esq., David A.

; REGISTRATION NUMBER: 26,742

; REFERENCE/DOCKET NUMBER: 1049-1-002 CIP

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 201-487-5800

; TELEFAX: 201-343-1684

; INFORMATION FOR SEQ ID NO: 8:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 306 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; HYPOTHETICAL: NO

; FRAGMENT TYPE:

; ORIGINAL SOURCE:

; ORGANISM: Rattus

US-08-935-855-8

Query Match 28.3%; Score 520; DB 3; Length 306;

Best Local Similarity 34.6%; Pred. No. 7.3e-48;

Matches 125; Conservative 58; Mismatches 104; Indels 74; Gaps 9;

QY 1 MGIYLCSPKTDKTSDEDAELRYGLSAMQGWDSMEDAHKAILNVDKNTST-SIFGIFD 59

Db 1 MGAFLDKPKMEKHNAQGGGNGRLRYGLSSMQGWRVEMEDAHTAVIGLPSGLETWSFFAVYD 60

QY 60 GHGSKLVAKFCAKHLHQEVLKSEAYAKG-----DLKASLEYSFLRMDMMKGASGWK 111

Db 61 GHAGSQVAKYCCHEHLLDHTNNQDF-KGSAGAPSVENVKNGIRTGFEIDEHMR----- 113

QY 112 ELQSLEETSSQLDKLGNNGSSNAREDDSDYSYAVLTESNDSNLATKKHKYSDFQGPY 171

Db 114 -----VMSE-----KKH-----GADRS 125

QY 172 GSTAVVALIRGNKLFVANAGDSRCIMSRGAEAVNLSIDHKPNLEHERKRIESAGGFVHGG 231

Db 126 GSTAVGVLLISPOHTYFINGCDSRGLLCNRNKKVHFFTDQHKPSNPLEKERIQNAGGSVMIQ 185

QY 232 RVNGSLNLTRAIGDMEFKGRPDLPDPKQVVTCCPDVVEVDLG-PGDEFIVLACDGIWDVM 290

Db 186 RVNGSLAVSRALGDFDYKCVHGKPTQLVSPPEVHDIERSEEDDQFIILACDGIWDVM 245

QY 291 SSQAVVDFVKSRLPTTKTSSLCEEILDYCLSPTRQQEGCDNMSIIV----QPKQSGV 346

Db 246 GNEELCDFVRSRLVTDDELEKVCNEVVDTCLYKGSR-----DNMSVILICFPNAPKVSAAE 300

QY 347 A 347

Db 301 A 301

RESULT 10

US-08-822-701-2

; Sequence 2, Application US/08822701

; Patent No. 5976853

; GENERAL INFORMATION:

; APPLICANT: Guthridge, Mark

; APPLICANT: Basilico, Claudio

; TITLE OF INVENTION: NOVEL GROWTH FACTOR INDUCIBLE

; TITLE OF INVENTION: SERINE/THREONINE PHOSPHATASE, FIN13

; NUMBER OF SEQUENCES: 18

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: David A. Jackson, Esq.

; STREET: 411 Hackensack Ave, Continental Plaza, 4th

; STREET: Floor

; CITY: Hackensack

; STATE: New Jersey

; COUNTRY: USA

; ZIP: 07601

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/822,701

; FILING DATE:

; CLASSIFICATION: 435

; ATTORNEY/AGENT INFORMATION:

; NAME: Jackson Esq., David A.

; REGISTRATION NUMBER: 26,742

; REFERENCE/DOCKET NUMBER: 1049-1-002 N

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 201-487-5800

; TELEFAX: 201-343-1684

; INFORMATION FOR SEQ ID NO: 2:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 392 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; HYPOTHETICAL: NO







```

; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; FRAGMENT TYPE:
; ORIGINAL SOURCE:
; ORGANISM: Saccharomyces cerevisiae
US-08-935-855-9

Query Match 18.6%; Score 341.5; DB 3; Length 281;
Best Local Similarity 28.0%; Pred. No. 1.3e-28;
Matches 96; Conservative 52; Mismatches 110; Indels 85; Gaps 11;

QY 14 SEDDNAELRYGLSAMQG-----WRDSMEDAHKAILNVDKNTSTSIIFGIFDGHGGKL 65
Db 5 SEILERPEPTYDITYRGVAENKNSKFRRTMEDVHTYVKNFASRLDWGYFAVFDGHAGIQ 64

QY 66 VAKFCAKHLH---QEVLKSEAYAKGDLKASLEYSFLRMDMMKMGASGWKELQSLEETSS 121
Db 65 ASKWCGKHLHTIEQNILADET---RDVRDVLNDSFLAID-----EEINT 106

QY 122 QLDKLGNGSSSNAREDDSDYSYAVL-----TESNDSNLATKKHKYSDFQGIYGSTAV 176
Db 107 KL----VGNSGCTA-----AVCVLRWELPDSVSDSDMDLAHQ----- 140

QY 177 VALIRGNKLFVANAGDSRCIMSRERGEAVNLSIDHKPNLEHERKRIESAGGFVHGGRVNGS 236
Db 141 -----RKLYTANVGDSRIVLFRNGNSIRLTYDHKASDTLEMQRVEQAGGLIMKSRVNGM 194

QY 237 LNLTRAIGDMEFKGRPDLPDPKQVVTCCPDVVEVDLPGDDEFIVLACDGIWDMSSQAVV 296
Db 195 LAVTRSLGDRFF-----DSLVLGSPFTTSVEITSEDKFLILACDGLWDVIDDQDAC 245

QY 297 DFVKSRLPTTKTLSSLCEEILDYCLSPTRQOEGCDNMSIIV 339
Db 246 ELIKDITEPNEAAKVLVRYALE---NGTT-----DNVTVMVV 279

RESULT 15
US-08-822-701-10
; Sequence 10, Application US/08822701
; Patent No. 5976853
; GENERAL INFORMATION:
; APPLICANT: Guthridge, Mark
; APPLICANT: Basilio, Claudio
; TITLE OF INVENTION: NOVEL GROWTH FACTOR INDUCIBLE
; TITLE OF INVENTION: SERINE/THREONINE PHOSPHATASE, FIN13
; NUMBER OF SEQUENCES: 18
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: David A. Jackson, Esq.
; STREET: 411 Hackensack Ave, Continental Plaza, 4th
; STREET: Floor
; CITY: Hackensack
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07601
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/822,701
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Jackson Esq., David A.
; REGISTRATION NUMBER: 26,742
; REFERENCE/DOCKET NUMBER: 1049-1-002 N
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 201-487-5800
; TELEFAX: 201-343-1684
```

```

; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 314 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; FRAGMENT TYPE:
; ORIGINAL SOURCE:
; ORGANISM: Leishmania
US-08-822-701-10

Query Match 17.8%; Score 326; DB 2; Length 314;
Best Local Similarity 30.2%; Pred. No. 7.2e-27;
Matches 109; Conservative 48; Mismatches 120; Indels 84; Gaps 12;

QY 1 MGIYLCSPKTDKTSDEDDNAELRYGLSAMQGWFDSDMEDAHKAILNVDKNTSTSIIFGIFDG 60
Db 1 MGIPLPKPVMTQLQERYGNAIFRCGNCVNGYRETMEDAHLTYL----TDSWGFFGVFDG 56

QY 61 HGKLVAKFCAKHLHQEVLKSEAYAKGDLKASLEYSFLRMDMMKMGASGWKELQSLEETS 120
Db 57 H----VNDQCSQYLER-----AWRSAIEKESIPMTDERMKEL-----ALRIDQ 95

QY 121 SQLDKLGNGNSSSNAREDDSDYSYAVLTESNDSNLATKKHKYSDFQGIYGSTAVVALI 180
Db 96 EWDSGREGGST-----GTFVVALK 115

QY 181 RGK--LFVANAGDSRCIMSRERGEAVNLSIDHKPNLEHERKRIESAGGFVHGGRVNGSLN 238
Db 116 EGNKVHLQVGNVGDSRVVACIDGVCVPLTEDHKPNNEGERQRIENCAGRVENNRVDGSLA 175

QY 239 LTRAIGDMEFKGRPDLPDPKQVVTCCPDVVEVDLG-PGDEFIVLACDGIWD-VMSSQAVV 296
Db 176 VSRAGDREYKLGSGSQLEQKVIALA-DVQHKDFTFDSNDFVLLCCDGVFEGNFPNEVV 234

QY 297 DFVKSRLPTTKTLSS----LCEEILDYCLSPTRQOEGCDNMSIIVQPKQ-SGVAASSS 351
Db 235 AYVKQOLETCNDLAEVAGRVCEEAI-----ERGSRDNISCMIIVQFKDGSDYAAEPH 285

QY 352 T 352
Db 286 T 286
```

Search completed: June 19, 2002, 08:44:02  
Job time: 142 sec



GenCore version 4.5  
Copyright (c) 1993 - 2000 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: June 19, 2002, 08:39:45 ; Search time 32.57 Seconds  
(without alignments)  
1203.839 Million cell updates/sec

Title: US-09-828-302-14  
Perfect score: 1836  
Sequence: 1 MGIYLCSPKTDKTSDDENA.....MSIIIVQPKQSGVAASSTD 353

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 747574 seqs, 111073796 residues

Total number of hits satisfying chosen parameters: 747574

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : A\_Geneseq\_032802.\*  
1: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1980.DAT.\*  
2: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1981.DAT.\*  
3: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1982.DAT.\*  
4: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1983.DAT.\*  
5: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1984.DAT.\*  
6: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1985.DAT.\*  
7: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1986.DAT.\*  
8: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1987.DAT.\*  
9: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1988.DAT.\*  
10: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1989.DAT.\*  
11: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1990.DAT.\*  
12: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1991.DAT.\*  
13: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1992.DAT.\*  
14: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1993.DAT.\*  
15: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1994.DAT.\*  
16: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1995.DAT.\*  
17: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1996.DAT.\*  
18: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1997.DAT.\*  
19: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1998.DAT.\*  
20: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA1999.DAT.\*  
21: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA2000.DAT.\*  
22: /SIDS1/gcgdata/hold-geneseq/geneseq-emb1/AA2001.DAT.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	973	53.0	357	21 AAG43237	Arabidopsis thalia
2	967	52.7	355	21 AAG43887	Arabidopsis thalia
3	869	47.3	327	21 AAG43888	Arabidopsis thalia
4	866	47.2	329	21 AAG43238	Arabidopsis thalia
5	838	45.6	320	21 AAG43889	Arabidopsis thalia
6	832	45.3	322	21 AAG43239	Arabidopsis thalia
7	764	41.6	315	21 AAG11786	Arabidopsis thalia
8	764	41.6	336	21 AAG11785	Arabidopsis thalia
9	764	41.6	339	21 AAG11784	Arabidopsis thalia
10	669.5	36.5	438	22 AAB82980	Trichoderma reesei
11	655.5	35.7	662	22 ABB59430	Drosophila melanog

12	643	35.0	546	19	AAW80287	Human MP-19 full l
13	627	34.2	258	21	AAG55036	Arabidopsis thalia
14	598	32.6	210	21	AAG08498	Arabidopsis thalia
15	588	32.0	293	21	AAG54775	Arabidopsis thalia
16	558.5	30.4	371	22	ABB58533	Drosophila melanog
17	558.5	30.4	371	22	ABB66446	Drosophila melanog
18	552.5	30.1	352	22	ABB59269	Drosophila melanog
19	549	29.9	367	22	ABB62019	Drosophila melanog
20	540.5	29.4	368	22	ABB58001	Drosophila melanog
21	538	29.3	479	20	AAW94283	Human protein phos
22	532	29.0	387	21	AAW86261	Human secreted pro
23	532	29.0	400	21	AAW56676	Human prostate can
24	519	28.3	155	21	AAG41053	Zea mays protein f
25	491.5	26.8	392	18	AAW30091	FIN13 serine/threo
26	491	26.7	182	21	AAG08499	Arabidopsis thalia
27	460	25.1	149	21	AAG41163	Zea mays protein f
28	457	24.9	175	21	AAG08500	Arabidopsis thalia
29	436	23.7	193	21	AAG34225	Zea mays protein f
30	436	23.7	253	21	AAG34224	Zea mays protein f
31	415.5	22.6	380	21	AAW77963	A. thaliana enviro
32	370.5	20.2	392	22	AAM38769	Human polypeptide
33	370.5	20.2	392	22	AAB92585	Human protein sequ
34	370.5	20.2	392	22	AAB28791	Human hydrolase-li
35	370.5	20.2	421	22	ABB12317	Human protein phos
36	370.5	20.2	421	22	AAW40555	Human polypeptide
37	370.5	20.2	441	22	AAU23566	Novel human enzyme
38	370.5	20.2	446	22	AAU22933	Novel human enzyme
39	367	20.0	114	21	AAG41054	Zea mays protein f
40	367	20.0	354	21	AAG06997	Arabidopsis thalia
41	357.5	19.5	423	22	AAE01345	Arabidopsis thalia
42	356.5	19.4	405	21	AAG14034	Arabidopsis thalia
43	356.5	19.4	410	21	AAG14033	Arabidopsis thalia
44	356.5	19.4	442	21	AAG14032	Arabidopsis thalia
45	354	19.3	434	22	AAE01344	Arabidopsis thalia

ALIGNMENTS

RESULT 1	
AAW80287	
ID AAG43237	standard; Protein; 357 AA.
XX	
AC AAG43237;	
XX	
DT 18-OCT-2000	(first entry)
XX	
DE Arabidopsis thaliana protein fragment	SEQ ID NO: 54019.
XX	
KW Protein identification; signal transduction pathway; metabolic pathway;	
KW hybridisation assay; genetic mapping; gene expression control; promoter;	
KW termination sequence.	
XX	
OS Arabidopsis thaliana.	
XX	
PN EP1033405-A2.	
XX	
PD 06-SEP-2000.	
XX	
PF 25-FEB-2000; 2000EP-0301439.	
XX	
PR 25-FEB-1999; 99US-0121825.	
PR 05-MAR-1999; 99US-0123180.	
PR 09-MAR-1999; 99US-0123548.	
PR 23-MAR-1999; 99US-0125788.	
PR 25-MAR-1999; 99US-0126264.	
PR 29-MAR-1999; 99US-0126785.	
PR 01-APR-1999; 99US-0127462.	
PR 06-APR-1999; 99US-0128234.	
PR 08-APR-1999; 99US-0128714.	
PR 16-APR-1999; 99US-0129845.	
PR 19-APR-1999; 99US-0130077.	
PR 21-APR-1999; 99US-0130449.	

PR 23-APR-1999; 99US-0130510.  
PR 23-APR-1999; 99US-0130891.  
PR 28-APR-1999; 99US-0131449.  
PR 30-APR-1999; 99US-0132048.  
PR 30-APR-1999; 99US-0132407.  
PR 04-MAY-1999; 99US-0132484.  
PR 05-MAY-1999; 99US-0132485.  
PR 06-MAY-1999; 99US-0132486.  
PR 06-MAY-1999; 99US-0132487.  
PR 07-MAY-1999; 99US-0132863.  
PR 11-MAY-1999; 99US-0134256.  
PR 14-MAY-1999; 99US-0134218.  
PR 14-MAY-1999; 99US-0134219.  
PR 14-MAY-1999; 99US-0134221.  
PR 14-MAY-1999; 99US-0134370.  
PR 18-MAY-1999; 99US-0134768.  
PR 19-MAY-1999; 99US-0134941.  
PR 20-MAY-1999; 99US-0135124.  
PR 21-MAY-1999; 99US-0135353.  
PR 24-MAY-1999; 99US-0135629.  
PR 25-MAY-1999; 99US-0136021.  
PR 27-MAY-1999; 99US-0136392.  
PR 28-MAY-1999; 99US-0136782.  
PR 01-JUN-1999; 99US-0137222.  
PR 03-JUN-1999; 99US-0137528.  
PR 04-JUN-1999; 99US-0137502.  
PR 07-JUN-1999; 99US-0137724.  
PR 08-JUN-1999; 99US-0138094.  
PR 10-JUN-1999; 99US-0138540.  
PR 10-JUN-1999; 99US-0138847.  
PR 14-JUN-1999; 99US-0139119.  
PR 16-JUN-1999; 99US-0139452.  
PR 16-JUN-1999; 99US-0139453.  
PR 17-JUN-1999; 99US-0139492.  
PR 18-JUN-1999; 99US-0139454.  
PR 18-JUN-1999; 99US-0139455.  
PR 18-JUN-1999; 99US-0139456.  
PR 18-JUN-1999; 99US-0139457.  
PR 18-JUN-1999; 99US-0139458.  
PR 18-JUN-1999; 99US-0139459.  
PR 18-JUN-1999; 99US-0139460.  
PR 18-JUN-1999; 99US-0139461.  
PR 18-JUN-1999; 99US-0139462.  
PR 18-JUN-1999; 99US-0139463.  
PR 18-JUN-1999; 99US-0139750.  
PR 18-JUN-1999; 99US-0139763.  
PR 21-JUN-1999; 99US-0139817.  
PR 22-JUN-1999; 99US-0139899.  
PR 23-JUN-1999; 99US-0140353.  
PR 23-JUN-1999; 99US-0140354.  
PR 24-JUN-1999; 99US-0140695.  
PR 28-JUN-1999; 99US-0140823.  
PR 29-JUN-1999; 99US-0140991.  
PR 30-JUN-1999; 99US-0141287.  
PR 01-JUL-1999; 99US-0141842.  
PR 01-JUL-1999; 99US-0142154.  
PR 02-JUL-1999; 99US-0142055.  
PR 06-JUL-1999; 99US-0142390.  
PR 08-JUL-1999; 99US-0142803.  
PR 09-JUL-1999; 99US-0142920.  
PR 12-JUL-1999; 99US-0142977.  
PR 13-JUL-1999; 99US-0143542.  
PR 14-JUL-1999; 99US-0143624.  
PR 15-JUL-1999; 99US-0144005.  
PR 16-JUL-1999; 99US-0144085.  
PR 16-JUL-1999; 99US-0144086.  
PR 19-JUL-1999; 99US-0144325.  
PR 19-JUL-1999; 99US-0144331.  
PR 19-JUL-1999; 99US-0144332.  
PR 19-JUL-1999; 99US-0144333.  
PR 19-JUL-1999; 99US-0144334.  
PR 19-JUL-1999; 99US-0144335.  
PR 20-JUL-1999; 99US-0144352.  
PR 20-JUL-1999; 99US-0144355.

PR 20-JUL-1999; 99US-0144632.  
PR 20-JUL-1999; 99US-0144884.  
PR 21-JUL-1999; 99US-0144814.  
PR 21-JUL-1999; 99US-0145086.  
PR 21-JUL-1999; 99US-0145088.  
PR 22-JUL-1999; 99US-0145085.  
PR 22-JUL-1999; 99US-0145087.  
PR 22-JUL-1999; 99US-0145089.  
PR 22-JUL-1999; 99US-0145192.  
PR 23-JUL-1999; 99US-0145145.  
PR 23-JUL-1999; 99US-0145218.  
PR 23-JUL-1999; 99US-0145224.  
PR 26-JUL-1999; 99US-0145276.  
PR 27-JUL-1999; 99US-0145913.  
PR 27-JUL-1999; 99US-0145918.  
PR 27-JUL-1999; 99US-0145919.  
PR 28-JUL-1999; 99US-0145951.  
PR 02-AUG-1999; 99US-0146386.  
PR 02-AUG-1999; 99US-0146388.  
PR 02-AUG-1999; 99US-0146389.  
PR 03-AUG-1999; 99US-0147038.  
PR 04-AUG-1999; 99US-0147204.  
PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.  
PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 23-AUG-1999; 99US-0149930.  
PR 25-AUG-1999; 99US-0150566.  
PR 26-AUG-1999; 99US-0150884.  
PR 27-AUG-1999; 99US-0151065.  
PR 27-AUG-1999; 99US-0151066.  
PR 27-AUG-1999; 99US-0151080.  
PR 30-AUG-1999; 99US-0151303.  
PR 31-AUG-1999; 99US-0151438.  
PR 01-SEP-1999; 99US-0151930.  
PR 07-SEP-1999; 99US-0152363.  
PR 10-SEP-1999; 99US-0153070.  
PR 13-SEP-1999; 99US-0153758.  
PR 15-SEP-1999; 99US-0154018.  
PR 16-SEP-1999; 99US-0154039.  
PR 20-SEP-1999; 99US-0154779.  
PR 22-SEP-1999; 99US-0155139.  
PR 23-SEP-1999; 99US-0155486.  
PR 24-SEP-1999; 99US-0155659.  
PR 28-SEP-1999; 99US-0156458.  
PR 29-SEP-1999; 99US-0156596.  
PR 04-OCT-1999; 99US-0157117.  
PR 05-OCT-1999; 99US-0157753.  
PR 06-OCT-1999; 99US-0157865.  
PR 07-OCT-1999; 99US-0158029.  
PR 08-OCT-1999; 99US-0158232.  
PR 12-OCT-1999; 99US-0158369.  
PR 13-OCT-1999; 99US-0159293.  
PR 13-OCT-1999; 99US-0159294.  
PR 13-OCT-1999; 99US-0159295.  
PR 14-OCT-1999; 99US-0159329.  
PR 14-OCT-1999; 99US-0159330.  
PR 14-OCT-1999; 99US-0159331.





PR	12-JUL-1999;	99US-0142977;
PR	13-JUL-1999;	99US-0143542;
PR	14-JUL-1999;	99US-0143624;
PR	15-JUL-1999;	99US-0144005;
PR	16-JUL-1999;	99US-0144085;
PR	16-JUL-1999;	99US-0144086;
PR	19-JUL-1999;	99US-0144325;
PR	19-JUL-1999;	99US-0144331;
PR	19-JUL-1999;	99US-0144332;
PR	19-JUL-1999;	99US-0144333;
PR	19-JUL-1999;	99US-0144334;
PR	19-JUL-1999;	99US-0144335;
PR	20-JUL-1999;	99US-0144352;
PR	20-JUL-1999;	99US-0144632;
PR	20-JUL-1999;	99US-0144884;
PR	21-JUL-1999;	99US-0144814;
PR	21-JUL-1999;	99US-0145086;
PR	21-JUL-1999;	99US-0145088;
PR	22-JUL-1999;	99US-0145085;
PR	22-JUL-1999;	99US-0145087;
PR	22-JUL-1999;	99US-0145089;
PR	22-JUL-1999;	99US-0145192;
PR	23-JUL-1999;	99US-0145145;
PR	23-JUL-1999;	99US-0145218;
PR	23-JUL-1999;	99US-0145224;
PR	26-JUL-1999;	99US-0145276;
PR	27-JUL-1999;	99US-0145913;
PR	27-JUL-1999;	99US-0145918;
PR	27-JUL-1999;	99US-0145919;
PR	28-JUL-1999;	99US-0145951;
PR	02-AUG-1999;	99US-0146386;
PR	02-AUG-1999;	99US-0146388;
PR	02-AUG-1999;	99US-0146389;
PR	03-AUG-1999;	99US-0147038;
PR	04-AUG-1999;	99US-0147204;
PR	04-AUG-1999;	99US-0147302;
PR	05-AUG-1999;	99US-0147192;
PR	05-AUG-1999;	99US-0147260;
PR	06-AUG-1999;	99US-0147303;
PR	06-AUG-1999;	99US-0147416;
PR	09-AUG-1999;	99US-0147493;
PR	09-AUG-1999;	99US-0147935;
PR	10-AUG-1999;	99US-0148171;
PR	11-AUG-1999;	99US-0148319;
PR	12-AUG-1999;	99US-0148341;
PR	13-AUG-1999;	99US-0148565;
PR	13-AUG-1999;	99US-0148684;
PR	16-AUG-1999;	99US-0149368;
PR	17-AUG-1999;	99US-0149175;
PR	18-AUG-1999;	99US-0149426;
PR	20-AUG-1999;	99US-0149722;
PR	20-AUG-1999;	99US-0149723;
PR	20-AUG-1999;	99US-0149929;
PR	23-AUG-1999;	99US-0149902;
PR	23-AUG-1999;	99US-0149930;
PR	25-AUG-1999;	99US-0150566;
PR	26-AUG-1999;	99US-0150884;
PR	27-AUG-1999;	99US-0151065;
PR	27-AUG-1999;	99US-0151066;
PR	27-AUG-1999;	99US-0151080;
PR	30-AUG-1999;	99US-0151303;
PR	31-AUG-1999;	99US-0151438;
PR	01-SEP-1999;	99US-0151930;
PR	07-SEP-1999;	99US-0152363;
PR	10-SEP-1999;	99US-0153070;
PR	13-SEP-1999;	99US-0153758;
PR	15-SEP-1999;	99US-0154018;
PR	16-SEP-1999;	99US-0154039;
PR	20-SEP-1999;	99US-0154779;
PR	22-SEP-1999;	99US-0155139;
PR	23-SEP-1999;	99US-0155486;
PR	24-SEP-1999;	99US-0155659;
PR	28-SEP-1999;	99US-0156458;

PR	29-SEP-1999;	99US-0156596.
PR	04-OCT-1999;	99US-0157117.
PR	05-OCT-1999;	99US-0157753.
PR	06-OCT-1999;	99US-0157865.
PR	07-OCT-1999;	99US-0158029.
PR	08-OCT-1999;	99US-0158232.
PR	12-OCT-1999;	99US-0158369.
PR	13-OCT-1999;	99US-0159293.
PR	13-OCT-1999;	99US-0159294.
PR	13-OCT-1999;	99US-0159295.
PR	14-OCT-1999;	99US-0159329.
PR	14-OCT-1999;	99US-0159330.
PR	14-OCT-1999;	99US-0159331.
PR	14-OCT-1999;	99US-0159637.
PR	14-OCT-1999;	99US-0159638.
PR	18-OCT-1999;	99US-0159584.
PR	21-OCT-1999;	99US-0160741.
PR	21-OCT-1999;	99US-0160767.
PR	21-OCT-1999;	99US-0160768.
PR	21-OCT-1999;	99US-0160770.
PR	21-OCT-1999;	99US-0160814.
PR	21-OCT-1999;	99US-0160815.
PR	22-OCT-1999;	99US-0160980.
PR	22-OCT-1999;	99US-0160981.
PR	22-OCT-1999;	99US-0160989.
PR	25-OCT-1999;	99US-0161404.
PR	25-OCT-1999;	99US-0161405.
PR	25-OCT-1999;	99US-0161406.
PR	26-OCT-1999;	99US-0161359.
PR	26-OCT-1999;	99US-0161360.
PR	26-OCT-1999;	99US-0161361.
PR	28-OCT-1999;	99US-0161920.
PR	28-OCT-1999;	99US-0161992.
PR	28-OCT-1999;	99US-0161993.
PR	29-OCT-1999;	99US-0162142.

Query Match	52.7%	Score 967	DB 21	Length 355
-------------	-------	-----------	-------	------------

Best Local Similarity 53.3%; Pred. No. 2.8e-81;

Best local similarity	Recall no.	Recall no.
Matches 188; Conservative 60; Mismatches 93; Indels 12; Gaps 2;		

Qy	1	MGYILCSPKTDKTS	EDDENAEIRYGLS	AMQWRDS	MEDAHKA	ILNV	DKN	TSIFG	IFDG	60
Db	1	mgtyisspktekl	sedgendkrlf	glssmqgw	ratmed	ahaa	ilddld	--dk	tsffgvdyg	58
Qy	61	HGKLVAKFC	AKHLHQEVL	KSPAYAK	GDCLK	ASLEYS	FLR	DEM	KMGASG	WKE
Db	59	hggkvvakfcakyl	hqqvisneay	ktgdvetsl	rraif	rdm	mqggrg	wrelav	lgdkm	118
Qy	121	SQDKLGN	GSSSNARE	DEDSY	AVLTES	ND	SNL	ATK	KKHY	SDFQ
Db	119	nkfsgmiegf	iwsprsgd	-----	tnnqp	dsw	pled	gphs	dftg	ptsg
Qy	181	RGNKLF	ANAGD	SRCIM	SRRG	EAV	NLSID	HKPN	LEHER	KRIES
Db	169	kdkklf	vanagds	rcvisr	ksqaynl	skdhk	pdleve	keril	kaggfi	hagring
Qy	241	RAIGDME	EKGR	PDLPP	DKQV	VTCC	PDVVE	VDLGP	GDEF	IVLAC
Db	229	raigdmef	kgnkflp	sekqmv	tadp	idntid	lcl	ddddd	flv	acdgi
Qy	301	SRLPTTK	TLSL	CEEI	LDY	GLS	PTTR	QOEG	CDNM	SIIV
Db	289	eqlksetkl	stvc	kvvdrc	lapd	tatg	egcd	nmtil	ivqf	kkpnp

RESULT 3  
AAG43888  
ID AAG43888 standard; Protein; 327 AA.  
XX  
AC AAG43888;  
DT  
XX 18-OCT-2000 (first entry)  
XX











PR 04-AUG-1999; 99US-0147204.  
PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.  
PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 23-AUG-1999; 99US-0149930.  
PR 25-AUG-1999; 99US-0150566.  
PR 26-AUG-1999; 99US-0150884.  
PR 27-AUG-1999; 99US-0151065.  
PR 27-AUG-1999; 99US-0151066.  
PR 27-AUG-1999; 99US-0151080.  
PR 30-AUG-1999; 99US-0151303.  
PR 31-AUG-1999; 99US-0151438.  
PR 01-SEP-1999; 99US-0151930.  
PR 07-SEP-1999; 99US-0152363.  
PR 10-SEP-1999; 99US-0153070.  
PR 13-SEP-1999; 99US-0153758.  
PR 15-SEP-1999; 99US-0154018.  
PR 16-SEP-1999; 99US-0154039.  
PR 20-SEP-1999; 99US-0154779.  
PR 22-SEP-1999; 99US-0155139.  
PR 23-SEP-1999; 99US-0155486.  
PR 24-SEP-1999; 99US-0155659.  
PR 28-SEP-1999; 99US-0156458.  
PR 29-SEP-1999; 99US-0156596.  
PR 04-OCT-1999; 99US-0157117.  
PR 05-OCT-1999; 99US-0157753.  
PR 06-OCT-1999; 99US-0157865.  
PR 07-OCT-1999; 99US-0158029.  
PR 08-OCT-1999; 99US-0158232.  
PR 12-OCT-1999; 99US-0158369.  
PR 13-OCT-1999; 99US-0159293.  
PR 13-OCT-1999; 99US-0159294.  
PR 13-OCT-1999; 99US-0159295.  
PR 14-OCT-1999; 99US-0159329.  
PR 14-OCT-1999; 99US-0159330.  
PR 14-OCT-1999; 99US-0159331.  
PR 14-OCT-1999; 99US-0159637.  
PR 14-OCT-1999; 99US-0159638.  
PR 18-OCT-1999; 99US-0159584.  
PR 21-OCT-1999; 99US-0160741.  
PR 21-OCT-1999; 99US-0160767.  
PR 21-OCT-1999; 99US-0160768.  
PR 21-OCT-1999; 99US-0160770.  
PR 21-OCT-1999; 99US-0160814.  
PR 21-OCT-1999; 99US-0160815.  
PR 22-OCT-1999; 99US-0160980.  
PR 22-OCT-1999; 99US-0160981.  
PR 22-OCT-1999; 99US-0160989.  
PR 25-OCT-1999; 99US-0161404.  
PR 25-OCT-1999; 99US-0161405.  
PR 25-OCT-1999; 99US-0161406.  
PR 26-OCT-1999; 99US-0161359.  
PR 26-OCT-1999; 99US-0161360.  
PR 26-OCT-1999; 99US-0161361.  
PR 28-OCT-1999; 99US-0161920.  
PR 28-OCT-1999; 99US-0161992.  
PR 28-OCT-1999; 99US-0161993.

PR 29-OCT-1999; 99US-0162142.  
Query Match 45.6%; Score 838; DB 21; Length 320;  
Best Local Similarity 51.6%; Pred. NO. 2.3e-69;  
Matches 164; Conservative 55; Mismatches 87; Indels 12; Gaps 2;  
QY 36 MEDAHKAILNVDKNTSTSI FGIFDGHGKLVAKFCAKHLHQEVLKSEAYAKGDLKASLEY 95  
Db 1 medahaailldl--dktsffgydydghgkvvakfcakylhqqvisneayktgdvetslrr 58  
QY 96 SFLRMDEMMKGASGWKELQSL EETSSQLDKLGNGNSSNAREDEDES DYSAVILTESNDSN 155  
Db 59 affrmddmmggqrgwrelavlgdkmnkfsgmiegfwsprsgd-----tnnqpds 108  
QY 156 LATKKHKYSDFGPIYGSTAVVALIRGNKLFVANAGDSRCIMSRRGAEAVNLSDHKPNLE 215  
Db 109 wpledghpsdftgptsgctacvalikdkklfvanagdsrvcvisrksqaynlskdhkpdle 168  
QY 216 HERKRIESAGGFVHGGRVNGSLNLT RAIGDMEFKGRPDLPDPKQVVTCPCPDVVEVDLPGP 275  
Db 169 vekerilkaggfihagringslnl traigmefkqnkflpsekqmvtdp dntidlcdd 228  
QY 276 DEFIVLACDGIWDMSSQAVDVFVKSR LPTTKTTLSSLC EEILDYCLSP TTRQEGGCDNMS 335  
Db 229 ddflvvacdgiwdcmssqelvd fiheqlksetklstvcekvvdrc lapdtatg egcdnmt 288  
QY 336 IIIVQPKQSGVAASSSTD 353  
Db 289 iilvqfkpnpseteped 306  
RESULT 6  
AAG43239  
ID AAG43239 standard; Protein; 322 AA.  
XX  
AC AAG43239;  
XX  
DT 18-OCT-2000 (first entry)  
XX  
DE Arabidopsis thaliana protein fragment SEQ ID NO: 54021.  
XX  
KW protein identification; signal transduction pathway; metabolic pathway;  
KW hybridisation assay; genetic mapping; gene expression control; promoter;  
KW termination sequence.  
XX  
OS Arabidopsis thaliana.  
XX  
PN EP1033405-A2.  
XX  
PD 06-SEP-2000.  
XX  
PF 25-FEB-2000; 2000EP-0301439.  
XX  
PR 25-FEB-1999; 99US-0121825.  
PR 05-MAR-1999; 99US-0123180.  
PR 09-MAR-1999; 99US-0123548.  
PR 23-MAR-1999; 99US-0125788.  
PR 25-MAR-1999; 99US-0126264.  
PR 29-MAR-1999; 99US-0126785.  
PR 01-APR-1999; 99US-0127462.  
PR 06-APR-1999; 99US-0128234.  
PR 08-APR-1999; 99US-0128714.  
PR 16-APR-1999; 99US-0129845.  
PR 19-APR-1999; 99US-0130077.  
PR 21-APR-1999; 99US-0130449.  
PR 23-APR-1999; 99US-0130510.  
PR 23-APR-1999; 99US-0130891.  
PR 28-APR-1999; 99US-0131449.  
PR 30-APR-1999; 99US-0132048.  
PR 30-APR-1999; 99US-0132407.  
PR 04-MAY-1999; 99US-0132484.  
PR 05-MAY-1999; 99US-0132485.  
PR 06-MAY-1999; 99US-0132486.

PR 06-MAY-1999; 99US-0132487.  
PR 07-MAY-1999; 99US-0132863.  
PR 11-MAY-1999; 99US-0134256.  
PR 14-MAY-1999; 99US-0134218.  
PR 14-MAY-1999; 99US-0134219.  
PR 14-MAY-1999; 99US-0134221.  
PR 14-MAY-1999; 99US-0134370.  
PR 18-MAY-1999; 99US-0134768.  
PR 19-MAY-1999; 99US-0134941.  
PR 20-MAY-1999; 99US-0135124.  
PR 21-MAY-1999; 99US-0135353.  
PR 24-MAY-1999; 99US-0135629.  
PR 25-MAY-1999; 99US-0136021.  
PR 27-MAY-1999; 99US-0136392.  
PR 28-MAY-1999; 99US-0136782.  
PR 01-JUN-1999; 99US-0137222.  
PR 03-JUN-1999; 99US-0137528.  
PR 04-JUN-1999; 99US-0137502.  
PR 07-JUN-1999; 99US-0137724.  
PR 08-JUN-1999; 99US-0138094.  
PR 10-JUN-1999; 99US-0138540.  
PR 10-JUN-1999; 99US-0138847.  
PR 14-JUN-1999; 99US-0139119.  
PR 16-JUN-1999; 99US-0139452.  
PR 16-JUN-1999; 99US-0139453.  
PR 17-JUN-1999; 99US-0139492.  
PR 18-JUN-1999; 99US-0139454.  
PR 18-JUN-1999; 99US-0139455.  
PR 18-JUN-1999; 99US-0139456.  
PR 18-JUN-1999; 99US-0139457.  
PR 18-JUN-1999; 99US-0139458.  
PR 18-JUN-1999; 99US-0139459.  
PR 18-JUN-1999; 99US-0139460.  
PR 18-JUN-1999; 99US-0139461.  
PR 18-JUN-1999; 99US-0139462.  
PR 18-JUN-1999; 99US-0139463.  
PR 18-JUN-1999; 99US-0139750.  
PR 18-JUN-1999; 99US-0139763.  
PR 21-JUN-1999; 99US-0139817.  
PR 22-JUN-1999; 99US-0139899.  
PR 23-JUN-1999; 99US-0140353.  
PR 23-JUN-1999; 99US-0140354.  
PR 24-JUN-1999; 99US-0140695.  
PR 28-JUN-1999; 99US-0140823.  
PR 29-JUN-1999; 99US-0140991.  
PR 30-JUN-1999; 99US-0141287.  
PR 01-JUL-1999; 99US-0141842.  
PR 01-JUL-1999; 99US-0142154.  
PR 02-JUL-1999; 99US-0142055.  
PR 06-JUL-1999; 99US-0142390.  
PR 08-JUL-1999; 99US-0142803.  
PR 09-JUL-1999; 99US-0142920.  
PR 12-JUL-1999; 99US-0142977.  
PR 13-JUL-1999; 99US-0143542.  
PR 14-JUL-1999; 99US-0143624.  
PR 15-JUL-1999; 99US-0144005.  
PR 16-JUL-1999; 99US-0144085.  
PR 16-JUL-1999; 99US-0144086.  
PR 19-JUL-1999; 99US-0144325.  
PR 19-JUL-1999; 99US-0144331.  
PR 19-JUL-1999; 99US-0144332.  
PR 19-JUL-1999; 99US-0144333.  
PR 19-JUL-1999; 99US-0144334.  
PR 19-JUL-1999; 99US-0144335.  
PR 20-JUL-1999; 99US-0144352.  
PR 20-JUL-1999; 99US-0144632.  
PR 20-JUL-1999; 99US-0144884.  
PR 21-JUL-1999; 99US-0144814.  
PR 21-JUL-1999; 99US-0145086.  
PR 21-JUL-1999; 99US-0145088.  
PR 22-JUL-1999; 99US-0145085.  
PR 22-JUL-1999; 99US-0145087.  
PR 22-JUL-1999; 99US-0145089.

PR 22-JUL-1999; 99US-0145192.  
PR 23-JUL-1999; 99US-0145145.  
PR 23-JUL-1999; 99US-0145218.  
PR 23-JUL-1999; 99US-0145224.  
PR 26-JUL-1999; 99US-0145276.  
PR 27-JUL-1999; 99US-0145913.  
PR 27-JUL-1999; 99US-0145918.  
PR 27-JUL-1999; 99US-0145919.  
PR 28-JUL-1999; 99US-0145951.  
PR 02-AUG-1999; 99US-0146386.  
PR 02-AUG-1999; 99US-0146388.  
PR 02-AUG-1999; 99US-0146389.  
PR 03-AUG-1999; 99US-0147038.  
PR 04-AUG-1999; 99US-0147204.  
PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.  
PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 23-AUG-1999; 99US-0149930.  
PR 25-AUG-1999; 99US-0150566.  
PR 26-AUG-1999; 99US-0150884.  
PR 27-AUG-1999; 99US-0151065.  
PR 27-AUG-1999; 99US-0151066.  
PR 27-AUG-1999; 99US-0151080.  
PR 30-AUG-1999; 99US-0151303.  
PR 31-AUG-1999; 99US-0151438.  
PR 01-SEP-1999; 99US-0151930.  
PR 07-SEP-1999; 99US-0152363.  
PR 10-SEP-1999; 99US-0153070.  
PR 13-SEP-1999; 99US-0153758.  
PR 15-SEP-1999; 99US-0154018.  
PR 16-SEP-1999; 99US-0154039.  
PR 20-SEP-1999; 99US-0154779.  
PR 22-SEP-1999; 99US-0155139.  
PR 23-SEP-1999; 99US-0155486.  
PR 24-SEP-1999; 99US-0155659.  
PR 28-SEP-1999; 99US-0156458.  
PR 29-SEP-1999; 99US-0156596.  
PR 04-OCT-1999; 99US-0157117.  
PR 05-OCT-1999; 99US-0157753.  
PR 06-OCT-1999; 99US-0157865.  
PR 07-OCT-1999; 99US-0158029.  
PR 08-OCT-1999; 99US-0158232.  
PR 12-OCT-1999; 99US-0158369.  
PR 13-OCT-1999; 99US-0159293.  
PR 13-OCT-1999; 99US-0159294.  
PR 13-OCT-1999; 99US-0159295.  
PR 14-OCT-1999; 99US-0159329.  
PR 14-OCT-1999; 99US-0159330.  
PR 14-OCT-1999; 99US-0159331.  
PR 14-OCT-1999; 99US-0159637.  
PR 14-OCT-1999; 99US-0159638.  
PR 18-OCT-1999; 99US-0159584.  
PR 21-OCT-1999; 99US-0160741.  
PR 21-OCT-1999; 99US-0160767.  
PR 21-OCT-1999; 99US-0160768.  
PR 21-OCT-1999; 99US-0160770.  
PR 21-OCT-1999; 99US-0160814.

PR	21-OCT-1999;	99US-0160815.	
PR	22-OCT-1999;	99US-0160980.	
PR	22-OCT-1999;	99US-0160981.	
PR	22-OCT-1999;	99US-0160989.	
PR	25-OCT-1999;	99US-0161404.	
PR	25-OCT-1999;	99US-0161405.	
PR	25-OCT-1999;	99US-0161406.	
PR	26-OCT-1999;	99US-0161359.	
PR	26-OCT-1999;	99US-0161360.	
PR	26-OCT-1999;	99US-0161361.	
PR	28-OCT-1999;	99US-0161920.	
PR	28-OCT-1999;	99US-0161992.	
PR	28-OCT-1999;	99US-0161993.	
PR	29-OCT-1999;	99US-0162142.	
Query Match 45.3%; Score 832; DB 21; Length 322;			
Best Local Similarity 52.9%; Pred. No. 8.2e-69;			
Matches 165; Conservative 52; Mismatches 73; Indels 22; Gaps 3;			
QY	36	MEDAHKAILNVDKNTSTSI	FGFDHGKKLVAKFC
Db	1	medahaaallddn--tsfl	gvdyghgkvvskfcakylhqqvlsdeayaagdvgtslqk
QY	96	SFLRDEMKGASGWKELQ	SLEETSSQLDKLNG-----NSSSNAREDD
Db	59	affrmdemngqgrgwrel	avlgdkinkfsgmiegliwsprsgdsankpda-----
QY	151	SNDSNLATKKHKYSDFQ	GPIYGSTAVVALIRGNKLFVANAGDSRCIM
Db	109	-----wafeegphsd	fagpnsgstacvavvrkqlfvanagdsr
QY	211	KPNLEHERKRRIESAG	FVHGVRVNGSLNLTRAIGDMEFKR
Db	164	kpdleaeakerilkagg	fihagrvmgsnlslraigmefkgnkflpsekqiv
QY	271	DLGPGDEFIVLACDGI	WDMSSQAVVDFVKSR
Db	224	elcddddfvlacdg	iwdcmstsgqlvdfiheqlnsetklsvvcek
QY	331	CDNMSIIIVQPK	342
Db	284	cdnmtmilvrfk	295
RESULT 7			
ID	AAG11786	standard; Protein; 315 AA.	
XX	AC	AAG11786;	
XX	DT	17-OCT-2000 (first entry)	
XX	DE	Arabidopsis thaliana protein fragment	SEQ ID NO: 10639.
XX	KW	protein identification; signal transduction pathway; metabolic pathway;	
KW	KW	hybridisation assay; genetic mapping; gene expression control; promoter;	
XX	OS	termination sequence.	
XX	PN	Arabidopsis thaliana.	
XX	PD	EP1033405-A2.	
XX	PF	06-SEP-2000.	
XX	PF	25-FEB-2000; 2000EP-0301439.	
XX	PR	25-FEB-1999; 99US-0121825.	
PR	PR	05-MAR-1999; 99US-0123180.	
PR	PR	09-MAR-1999; 99US-0123548.	
PR	PR	23-MAR-1999; 99US-0125788.	
PR	PR	25-MAR-1999; 99US-0126264.	
PR	PR	29-MAR-1999; 99US-0126785.	
PR	PR	01-APR-1999; 99US-0127462.	

PR	06-APR-1999;	99US-0128234.
PR	08-APR-1999;	99US-0128714.
PR	16-APR-1999;	99US-0129845.
PR	19-APR-1999;	99US-0130077.
PR	21-APR-1999;	99US-0130449.
PR	23-APR-1999;	99US-0130510.
PR	23-APR-1999;	99US-0130891.
PR	28-APR-1999;	99US-0131449.
PR	30-APR-1999;	99US-0132048.
PR	30-APR-1999;	99US-0132407.
PR	04-MAY-1999;	99US-0132484.
PR	05-MAY-1999;	99US-0132485.
PR	06-MAY-1999;	99US-0132486.
PR	06-MAY-1999;	99US-0132487.
PR	07-MAY-1999;	99US-0132863.
PR	11-MAY-1999;	99US-0134256.
PR	14-MAY-1999;	99US-0134218.
PR	14-MAY-1999;	99US-0134219.
PR	14-MAY-1999;	99US-0134221.
PR	14-MAY-1999;	99US-0134370.
PR	18-MAY-1999;	99US-0134768.
PR	19-MAY-1999;	99US-0134941.
PR	20-MAY-1999;	99US-0135124.
PR	21-MAY-1999;	99US-0135353.
PR	24-MAY-1999;	99US-0135629.
PR	25-MAY-1999;	99US-0136021.
PR	27-MAY-1999;	99US-0136392.
PR	28-MAY-1999;	99US-0136782.
PR	01-JUN-1999;	99US-0137222.
PR	03-JUN-1999;	99US-0137528.
PR	04-JUN-1999;	99US-0137502.
PR	07-JUN-1999;	99US-0137724.
PR	08-JUN-1999;	99US-0138094.
PR	10-JUN-1999;	99US-0138540.
PR	10-JUN-1999;	99US-0138847.
PR	14-JUN-1999;	99US-0139119.
PR	16-JUN-1999;	99US-0139452.
PR	16-JUN-1999;	99US-0139453.
PR	17-JUN-1999;	99US-0139492.
PR	18-JUN-1999;	99US-0139454.
PR	18-JUN-1999;	99US-0139455.
PR	18-JUN-1999;	99US-0139456.
PR	18-JUN-1999;	99US-0139457.
PR	18-JUN-1999;	99US-0139458.
PR	18-JUN-1999;	99US-0139459.
PR	18-JUN-1999;	99US-0139460.
PR	18-JUN-1999;	99US-0139461.
PR	18-JUN-1999;	99US-0139462.
PR	18-JUN-1999;	99US-0139463.
PR	18-JUN-1999;	99US-0139750.
PR	18-JUN-1999;	99US-0139763.
PR	21-JUN-1999;	99US-0139817.
PR	22-JUN-1999;	99US-0139899.
PR	23-JUN-1999;	99US-0140353.
PR	23-JUN-1999;	99US-0140354.
PR	24-JUN-1999;	99US-0140695.
PR	28-JUN-1999;	99US-0140823.
PR	29-JUN-1999;	99US-0140991.
PR	30-JUN-1999;	99US-0141287.
PR	01-JUL-1999;	99US-0141842.
PR	01-JUL-1999;	99US-0142154.
PR	02-JUL-1999;	99US-0142055.
PR	06-JUL-1999;	99US-0142390.
PR	08-JUL-1999;	99US-0142803.
PR	09-JUL-1999;	99US-0142920.
PR	12-JUL-1999;	99US-0142977.
PR	13-JUL-1999;	99US-0143542.
PR	14-JUL-1999;	99US-0143624.
PR	15-JUL-1999;	99US-0144005.
PR	16-JUL-1999;	99US-0144085.
PR	16-JUL-1999;	99US-0144086.
PR	19-JUL-1999;	99US-0144325.
PR	19-JUL-1999;	99US-0144331.



PF	25-FEB-2000;	2000EP-0301439.	
XX			
PR	25-FEB-1999;	99US-0121825.	99US-0142920.
PR	05-MAR-1999;	99US-0123180.	99US-0142977.
PR	09-MAR-1999;	99US-0123548.	99US-0143542.
PR	23-MAR-1999;	99US-0125788.	99US-0143624.
PR	25-MAR-1999;	99US-0126264.	99US-0144005.
PR	29-MAR-1999;	99US-0126785.	99US-0144085.
PR	01-APR-1999;	99US-0127462.	99US-0144086.
PR	06-APR-1999;	99US-0128234.	99US-0144325.
PR	08-APR-1999;	99US-0128714.	99US-0144331.
PR	16-APR-1999;	99US-0129845.	99US-0144332.
PR	19-APR-1999;	99US-0130077.	99US-0144333.
PR	21-APR-1999;	99US-0130449.	99US-0144334.
PR	23-APR-1999;	99US-0130510.	99US-0144335.
PR	23-APR-1999;	99US-0130891.	99US-0144352.
PR	28-APR-1999;	99US-0131449.	99US-0144632.
PR	30-APR-1999;	99US-0132048.	99US-0144884.
PR	30-APR-1999;	99US-0132407.	99US-0144814.
PR	04-MAY-1999;	99US-0132484.	99US-0145086.
PR	05-MAY-1999;	99US-0132485.	99US-0145088.
PR	06-MAY-1999;	99US-0132486.	99US-0145085.
PR	06-MAY-1999;	99US-0132487.	99US-0145087.
PR	07-MAY-1999;	99US-0132863.	99US-0145089.
PR	11-MAY-1999;	99US-0134256.	99US-0145192.
PR	14-MAY-1999;	99US-0134218.	99US-0145145.
PR	14-MAY-1999;	99US-0134221.	99US-0145218.
PR	14-MAY-1999;	99US-0134370.	99US-0145224.
PR	18-MAY-1999;	99US-0134768.	99US-0145276.
PR	19-MAY-1999;	99US-0134941.	99US-0145913.
PR	20-MAY-1999;	99US-0135124.	99US-0145918.
PR	21-MAY-1999;	99US-0135353.	99US-0145919.
PR	24-MAY-1999;	99US-0135629.	99US-0145951.
PR	25-MAY-1999;	99US-0136021.	99US-0146386.
PR	27-MAY-1999;	99US-0136392.	99US-0146389.
PR	28-MAY-1999;	99US-0136782.	99US-0147038.
PR	01-JUN-1999;	99US-0137222.	99US-0147204.
PR	03-JUN-1999;	99US-0137528.	99US-0147302.
PR	04-JUN-1999;	99US-0137502.	99US-0147192.
PR	07-JUN-1999;	99US-0137724.	99US-0147260.
PR	08-JUN-1999;	99US-0138094.	99US-0147303.
PR	10-JUN-1999;	99US-0138540.	99US-0147416.
PR	10-JUN-1999;	99US-0138847.	99US-0147493.
PR	14-JUN-1999;	99US-0139119.	99US-0147935.
PR	16-JUN-1999;	99US-0139452.	99US-0148171.
PR	16-JUN-1999;	99US-0139453.	99US-0148319.
PR	17-JUN-1999;	99US-0139454.	99US-0148341.
PR	18-JUN-1999;	99US-0139455.	99US-0148565.
PR	18-JUN-1999;	99US-0139456.	99US-0148684.
PR	18-JUN-1999;	99US-0139457.	99US-0149368.
PR	18-JUN-1999;	99US-0139458.	99US-0149175.
PR	18-JUN-1999;	99US-0139459.	99US-014926.
PR	18-JUN-1999;	99US-0139460.	99US-0149722.
PR	18-JUN-1999;	99US-0139461.	99US-0149723.
PR	18-JUN-1999;	99US-0139462.	99US-0149929.
PR	18-JUN-1999;	99US-0139463.	99US-0149902.
PR	18-JUN-1999;	99US-0139750.	99US-0149930.
PR	18-JUN-1999;	99US-0139763.	99US-0150566.
PR	21-JUN-1999;	99US-0139817.	99US-0150884.
PR	22-JUN-1999;	99US-0139899.	99US-0151065.
PR	23-JUN-1999;	99US-0140353.	99US-0151066.
PR	23-JUN-1999;	99US-0140354.	99US-0151080.
PR	24-JUN-1999;	99US-0140695.	99US-0151303.
PR	28-JUN-1999;	99US-0140823.	99US-0151438.
PR	29-JUN-1999;	99US-0140991.	99US-0151930.
PR	30-JUN-1999;	99US-0141287.	99US-0152363.
PR	01-JUL-1999;	99US-0141842.	99US-0153070.
PR	01-JUL-1999;	99US-0142154.	99US-0153758.
PR	02-JUL-1999;	99US-0142055.	99US-0154018.
PR	06-JUL-1999;	99US-0142390.	99US-0154039.
PR	08-JUL-1999;	99US-0142803.	99US-0154779.
			99US-0155139.
			99US-0155486.
			99US-0155659.



PR	28-SEP-1999;	99US-0156458.	
PR	29-SEP-1999;	99US-0156596.	
PR	04-OCT-1999;	99US-0157117.	
PR	05-OCT-1999;	99US-0157753.	
PR	06-OCT-1999;	99US-0157865.	
PR	07-OCT-1999;	99US-0158029.	
PR	08-OCT-1999;	99US-0158232.	
PR	12-OCT-1999;	99US-0158369.	
PR	13-OCT-1999;	99US-0159293.	
PR	13-OCT-1999;	99US-0159294.	
PR	13-OCT-1999;	99US-0159295.	
PR	14-OCT-1999;	99US-0159329.	
PR	14-OCT-1999;	99US-0159330.	
PR	14-OCT-1999;	99US-0159331.	
PR	14-OCT-1999;	99US-0159637.	
PR	14-OCT-1999;	99US-0159638.	
PR	18-OCT-1999;	99US-0159584.	
PR	21-OCT-1999;	99US-0160741.	
PR	21-OCT-1999;	99US-0160767.	
PR	21-OCT-1999;	99US-0160768.	
PR	21-OCT-1999;	99US-0160770.	
PR	21-OCT-1999;	99US-0160814.	
PR	21-OCT-1999;	99US-0160815.	
PR	22-OCT-1999;	99US-0160980.	
PR	22-OCT-1999;	99US-0160981.	
PR	22-OCT-1999;	99US-0160989.	
PR	25-OCT-1999;	99US-0161404.	
PR	25-OCT-1999;	99US-0161405.	
PR	25-OCT-1999;	99US-0161406.	
PR	26-OCT-1999;	99US-0161359.	
PR	26-OCT-1999;	99US-0161360.	
PR	26-OCT-1999;	99US-0161361.	
PR	28-OCT-1999;	99US-0161920.	
PR	28-OCT-1999;	99US-0161992.	
PR	28-OCT-1999;	99US-0161993.	
PR	29-OCT-1999;	99US-0162142.	
Query Match 41.6%; Score 764; DB 21; Length 336;			
Best Local Similarity 50.9%; Pred. No. 1.8e-62;			
Matches 149; Conservative 51; Mismatches 83; Indels 10; Gaps 1;			
QY	61	HGGKLVAKFCAKHLHQEVLKSEAYAKGDLKASLEYSFLRMDEMMKGASGWKELQSLSEFS	120
Db	40	hgkvvakfcakylhqqvlsneayktgdvetslrraffrmdmnmqgqrgwrelavlgdkm	99
QY	121	SQLDKLGNGNSSNAREDDSDSYAVLFTESNDSNLATKKHKYSDFQGPYIGSTAVVALI	180
Db	100	nksgmiegfwiwprsgd-----tnnqpdswpledghsdftgptsgctacvali	149
QY	181	RGNKLFVANAGDSRCTMSRRGEAVNLSIDHKPNLEHERKRIESAGGFVHGGRVNGSLNLT	240
Db	150	kdkklfvanagdsrclvrsksqaynlskdhkpdlevekerilkaggfihagringslnlt	209
QY	241	RAIGDMEFKGRPDLPDPKQVVTCCPDVVVEVDLGPGEFIVLACDGIWDMSSQAVVDFVK	300
Db	210	raigdmefkqnkflpsekqmvtdpdtintidldcdddflvvacdgiwdcmssqelvdflh	269
QY	301	SRLPTTKTLSSLCEEILDYCLSPTRQOQEGCDNMSIIIVQPKOSGVAASSSTD	353
Db	270	eqlkskltstvcckvvdrcldpdtatgdcgdnmtiilvqfkknppseteped	322
RESULT 9			
AAG11784			
ID	AAG11784 standard; Protein; 339 AA.		
XX			
AC	AAG11784;		
XX			
DT	17-OCT-2000 (first entry)		
XX			
DE	Arabidopsis thaliana protein fragment SEQ ID NO: 10637.		
XX			
KW	Protein identification; signal transduction pathway; metabolic pathway;		

KW	hybridisation assay; genetic mapping; gene expression control; promoter;		
KW	termination sequence.		
XX			
OS	Arabidopsis thaliana.		
XX			
PN	EPI033405-A2.		
XX			
PD	06-SEP-2000.		
XX			
PF	25-FEB-2000; 2000EP-0301439.		
XX			
PR	25-FEB-1999;	99US-0121825.	
PR	05-MAR-1999;	99US-0123180.	
PR	09-MAR-1999;	99US-0123548.	
PR	23-MAR-1999;	99US-0125788.	
PR	25-MAR-1999;	99US-0126264.	
PR	29-MAR-1999;	99US-0126785.	
PR	01-APR-1999;	99US-0127462.	
PR	06-APR-1999;	99US-0128234.	
PR	08-APR-1999;	99US-0128714.	
PR	16-APR-1999;	99US-0129845.	
PR	19-APR-1999;	99US-0130077.	
PR	21-APR-1999;	99US-0130449.	
PR	23-APR-1999;	99US-0130510.	
PR	23-APR-1999;	99US-0130891.	
PR	28-APR-1999;	99US-0131449.	
PR	30-APR-1999;	99US-0132048.	
PR	30-APR-1999;	99US-0132407.	
PR	04-MAY-1999;	99US-0132484.	
PR	05-MAY-1999;	99US-0132485.	
PR	06-MAY-1999;	99US-0132486.	
PR	06-MAY-1999;	99US-0132487.	
PR	07-MAY-1999;	99US-0132863.	
PR	11-MAY-1999;	99US-0134256.	
PR	14-MAY-1999;	99US-0134218.	
PR	14-MAY-1999;	99US-0134219.	
PR	14-MAY-1999;	99US-0134221.	
PR	14-MAY-1999;	99US-0134370.	
PR	18-MAY-1999;	99US-0134768.	
PR	19-MAY-1999;	99US-0134941.	
PR	20-MAY-1999;	99US-0135124.	
PR	21-MAY-1999;	99US-0135353.	
PR	24-MAY-1999;	99US-0135629.	
PR	25-MAY-1999;	99US-0136021.	
PR	27-MAY-1999;	99US-0136392.	
PR	28-MAY-1999;	99US-0136782.	
PR	01-JUN-1999;	99US-0137222.	
PR	03-JUN-1999;	99US-0137528.	
PR	04-JUN-1999;	99US-0137502.	
PR	07-JUN-1999;	99US-0137724.	
PR	08-JUN-1999;	99US-0138094.	
PR	10-JUN-1999;	99US-0138540.	
PR	10-JUN-1999;	99US-0138847.	
PR	14-JUN-1999;	99US-0139119.	
PR	16-JUN-1999;	99US-0139452.	
PR	16-JUN-1999;	99US-0139453.	
PR	17-JUN-1999;	99US-0139492.	
PR	18-JUN-1999;	99US-0139454.	
PR	18-JUN-1999;	99US-0139455.	
PR	18-JUN-1999;	99US-0139456.	
PR	18-JUN-1999;	99US-0139457.	
PR	18-JUN-1999;	99US-0139458.	
PR	18-JUN-1999;	99US-0139459.	
PR	18-JUN-1999;	99US-0139460.	
PR	18-JUN-1999;	99US-0139461.	
PR	18-JUN-1999;	99US-0139462.	
PR	18-JUN-1999;	99US-0139463.	
PR	18-JUN-1999;	99US-0139750.	
PR	18-JUN-1999;	99US-0139763.	
PR	21-JUN-1999;	99US-0139817.	
PR	22-JUN-1999;	99US-0139899.	
PR	23-JUN-1999;	99US-0140353.	
PR	23-JUN-1999;	99US-0140354.	



AAB82980	standard; Protein; 438 AA.
AAB82980;	
21-DEC-2001	(first entry)
Trichoderma reesei PTC2,	involved in unfolded protein response.
PTC2; phosphatase; unfolded	protein response; protein secretion.
Trichoderma reesei.	
WO200172783-A2.	
04-OCT-2001.	
23-MAR-2001; 2001WO-US09401.	
24-MAR-2000; 2000US-0534692.	
(GEMV ) GENENCOR INT INC.	
Penttila ME, Ward M, Wang H,	Valkonen MJ, Saloheimo MLA;
WPI; 2001-626252/72.	
N-PSDB; AAH26935.	
Increasing secretion of heterologous proteins e.g. lipase and cellulase	
in eukaryotic cells useful in industry to increase production and	
facilitate purification, by inducing an elevated unfolded protein	
response -	
Claim 66; Fig 25; 89pp; English.	
The present sequence is that of Trichoderma reesei PTC2, a protein	
phosphatase that dephosphorylates IRE1 protein and regulates the	
unfolded protein response (UPR). The invention provides methods	
for increasing the secretion of a heterologous protein in a cell by	
inducing an elevated UPR. This can be achieved by modulating the	
activity of HAC1 (or hacA), PTC2/B or IRE1 in the cell. The cell	
from which the protein is secreted can be any cell having an UPR,	
such as mammalian cells, insect cells, yeast and filamentous fungi.	
The protein of interest can be any secreted protein such as a	
therapeutic protein or an industrial enzyme, e.g. lipase, cellulase,	
isomerase-H, protease, carbohydrtase, reductase, Oxidase,	
isomerase, transferase, kinase, phosphatase, alpha-amylase,	
glucoamylase, lignocellulose hemicellulase, pectinase and ligninase	
(claimed).	
Sequence 438 AA;	
Query Match	36.5%; Score 669.5; DB 22; Length 438;
Best Local Similarity	43.1%; Pred. NO. 1.5e-53;
Matches 150; Conservative	42; Mismatches 91; Indels 65; Gaps 7;
QY 1 MGIVLCSPKTDKTSEDDENAELRYGLSAMQGWRDSMEDAHKAILNV---	DKNSTST----- 52
Db 1 mgqtlsepvvektsekgedrliygvsamqgwrismedahtaelnlppdpndtkthpdr1	60
QY 53 SIFGIFDGHGGKLVAFCFAKHLHQEVLKSEAYAKGDLKASLEYSFLRMDEMMKGASGWKE	112
Db 61 sffgvfdghgdkvalfagenihnivfkgesfskgyaqgklkgdglatr-----	110
QY 113 LQSLEETSSQLDKLGNNGNSSNAREDDDESIDSYAVLTESNDNSLATKKHKYSDFQGIYG	172
Db 111 -----ail---ndp-----kyee---evsg	124
QY 173 STAVVALIRGNKLFVANAGDSRCIMSRERGEAVNLSDHKNPLEHERKRIESAGGFVHGGR	232
Db 125 ctacvtliagnklyvanagdsrsvlgikgrakplsndhhkpqleteknrtaaggfvdfgr	184
QY 233 VNGSLNLTRAIGDMERFKGRPDLPPDKQVVTCCPDVVVEVDLGPGDDEFIVLACDGINDVMSS	292

D	b		I:::	: :	:	fvdadaddyeedlaelqeesnlplnevelykglpqkdkldlkssdhkenfkmrpyf	178
Q	y					-----QLDKLGNSSN-----	134
D	b			:	:	rgrraaalaaeatnkavmdpsakpdgsstsaaaaaalsadvansrnpsnvvnpmagad	238
Q	y			-AREDE-	--SDYSYAVLTESDNSLAT--		158
D	b		sntttsindlstknaalkddsvndqnegsngtfkhtlvssnkkflfatgsndmtelnqs				298
Q	y		KHKY-		--SDFQ-		167
D	b		skneftnsstskeferninsqddeftdddadyeendvkvspdtssaessdctendddgd				358
Q	y					GPIYGSTAVVALIRGNKLFVANAGDSRCIM	197
D	b		edgnedsdeetdedqmandnfcanmieepgkdsgctavvcllqgrdlvyanagsrcvi				418
Q	y		SRRGEAVNLSDHKNLEHERKRIESAGGFVH-GGRVNGSLNLTTRAIGDMEFGRPDLPP				256
D	b		srsqgaemsidhkpeddeasriikaggrrvtldgrvngglnsralgdhayktvntlpa				478
Q	y		DKQVTCCPDVVEVDLGPGDEFIVLACDGINDVMSSQAQVVDFVKSRLLPTTKTLSSLCEEI				316
D	b		eeqmisaalpdkikliitpedefnvlacdgivwnymssveevfvcrclkdnklsticeel				538
Q	y		LDYCLSPTR-QOEGCDNMIIIVQPK-----QSQVAASSTD				353
D	b		fdnclapntmgdgtgcdnmtavivqfkkklqelgstippnqtcd				582

RESULT 12	
AAW80287	
ID	AAW80287 standard; Protein; 546 AA.
XX	
XX	AAW80287;
DT	19-JAN-1999 (first entry)
XX	
DE	Human MP-19 full length protein sequence.
XX	
KW	Human; MP-19; serine-threonine phosphatase; cancer; diagnosis;
KW	phosphorylation dependent disease; leukaemia; breast; brain;
KW	prostate; epilepsy; fatty acid; cholesterol.
XX	
OS	Homo sapiens.
XX	
FH	Key
FT	Location/Qualifiers
FT	1..112
FT	/note= "protein sequence given in the specification"
FT	1..546
FT	/note= "protein decoded by AAV66512"

EP874052-A2.	
28-OCT-1998.	
22-APR-1998;	98EP-0107346.
22-APR-1997;	97EP-0106658.
(BIOP-) BIOPHARM GES BIOTECHNOLOGISCHEN ENTWICKL.	
Hanke M, Paulista M, Pohl J;	
WPI; 1998-544644/47.	
N-PSDB; AAV66512.	
DNA encoding human protein phosphatase polypeptide - useful in treatment of leukaemia, breast, brain and prostate cancer, epilepsy etc.	

PS	Claim 8; Page 12; 15pp; English.	
XX		
CC	The present sequence represents full length human MP-19, which	
CC	is a serine/threonine phosphatase derived from human placenta. The	
CC	nucleic acid sequence encodes a human protein phosphatase of the	
CC	protein serine/threonine phosphatase family and is of the PP2C class	
CC	which are regulate in the regulation of fatty acid and cholesterol	
CC	biosynthesis. The MP-19 protein is useful in the treatment of leukaemia,	
CC	brain, prostate and breast cancer, Alzheimer's, Huntington's or	
CC	Parkinson's diseases, epilepsy, reproductive disorders and regulation of	
CC	spermatogenesis or maturation of mammalian germ cells.	
XX		
SQ	Sequence 546 AA;	





PR 22-SEP-1999; 99US-0155139.  
PR 23-SEP-1999; 99US-0155486.  
PR 24-SEP-1999; 99US-0155659.  
PR 28-SEP-1999; 99US-0156458.  
PR 29-SEP-1999; 99US-0156596.  
PR 04-OCT-1999; 99US-0157117.  
PR 05-OCT-1999; 99US-0157753.  
PR 06-OCT-1999; 99US-0157865.  
PR 07-OCT-1999; 99US-0158029.  
PR 08-OCT-1999; 99US-0158232.  
PR 12-OCT-1999; 99US-0158369.  
PR 13-OCT-1999; 99US-0159293.  
PR 13-OCT-1999; 99US-0159294.  
PR 13-OCT-1999; 99US-0159295.  
PR 14-OCT-1999; 99US-0159329.  
PR 14-OCT-1999; 99US-0159330.  
PR 14-OCT-1999; 99US-0159331.  
PR 14-OCT-1999; 99US-0159637.  
PR 14-OCT-1999; 99US-0159638.  
PR 18-OCT-1999; 99US-0159584.  
PR 21-OCT-1999; 99US-0160741.  
PR 21-OCT-1999; 99US-0160767.  
PR 21-OCT-1999; 99US-0160768.  
PR 21-OCT-1999; 99US-0160770.  
PR 21-OCT-1999; 99US-0160814.  
PR 21-OCT-1999; 99US-0160815.  
PR 22-OCT-1999; 99US-0160980.  
PR 22-OCT-1999; 99US-0160981.  
PR 22-OCT-1999; 99US-0160989.  
PR 25-OCT-1999; 99US-0161404.  
PR 25-OCT-1999; 99US-0161405.  
PR 25-OCT-1999; 99US-0161406.  
PR 26-OCT-1999; 99US-0161359.  
PR 26-OCT-1999; 99US-0161360.  
PR 26-OCT-1999; 99US-0161361.  
PR 28-OCT-1999; 99US-0161920.  
PR 28-OCT-1999; 99US-0161992.  
PR 28-OCT-1999; 99US-0161993.  
PR 29-OCT-1999; 99US-0162142.

Query Match 34.2%; Score 627; DB 21; Length 258;  
Best Local Similarity 49.2%; Pred. No. 6.4e-50;  
Matches 125; Conservative 43; Mismatches 76; Indels 10; Gaps 1;

QY 100 MDEMKGASGWKELQSLEETSSQLDKLGNSSNAREDESYSYAVLTESNDSNLATK 159  
Db 1 mddmmqgrgrelavlgdkmnkfsgmiegfwiwprsgd-----tnnqpdswple 50  
QY 160 KHKYSDFQGPPIYGSTAVVALIRGNKLFVANAGDSRCIMSRRGEAVNLSIDHKPNLEHERK 219  
Db 51 dgphsdfgtgtsctacvalikdklfvanagdsrvcisrksqaynlksdkhkpdlleveke 110  
QY 220 RIESAGGFVHGGRVNGSLNLTARIGDMFEKGRPDLPDPKQVVTCCPDVVEVDLGPGEDEFI 279  
Db 111 rilkggfihagringsnltraigdmefkqkflpsekqmvtdapdintidlcddddfl 170  
QY 280 VLACDGIWDMSSQAVVDFVKSLRPTTKTLSSLCEEILDYCLSPTRRQEGGDNMSIIIV 339  
Db 171 vvacdgiwcdmssqelvdvfiheqlksetklstvcvkvdrclapdtatgegcdmtilv 230  
QY 340 QPKQSGVMASSSTD 353  
Db 231 qfkkpnpseteped 244

RESULT 14  
AAG08498  
ID AAG08498 standard; Protein; 210 AA.  
XX  
AC AAG08498;  
XX  
DT 17-OCT-2000 (first entry)  
XX

DE Arabidopsis thaliana protein fragment SEQ ID NO: 6060.  
XX  
KW Protein identification; signal transduction pathway; metabolic pathway;  
KW hybridisation assay; genetic mapping; gene expression control; promoter;  
KW termination sequence.  
XX  
OS Arabidopsis thaliana.  
XX  
PN EP1033405-A2.  
XX  
PD 06-SEP-2000.  
XX  
PF 25-FEB-2000; 2000EP-0301439.  
XX  
PR 25-FEB-1999; 99US-0121825.  
PR 05-MAR-1999; 99US-0123180.  
PR 09-MAR-1999; 99US-0123548.  
PR 23-MAR-1999; 99US-0125788.  
PR 25-MAR-1999; 99US-0126264.  
PR 29-MAR-1999; 99US-0126785.  
PR 01-APR-1999; 99US-0127462.  
PR 06-APR-1999; 99US-0128234.  
PR 08-APR-1999; 99US-0128714.  
PR 16-APR-1999; 99US-0129845.  
PR 19-APR-1999; 99US-0130077.  
PR 21-APR-1999; 99US-0130449.  
PR 23-APR-1999; 99US-0130510.  
PR 23-APR-1999; 99US-0130891.  
PR 28-APR-1999; 99US-0131449.  
PR 30-APR-1999; 99US-0132048.  
PR 30-APR-1999; 99US-0132407.  
PR 04-MAY-1999; 99US-0132484.  
PR 05-MAY-1999; 99US-0132485.  
PR 06-MAY-1999; 99US-0132486.  
PR 06-MAY-1999; 99US-0132487.  
PR 07-MAY-1999; 99US-0132863.  
PR 11-MAY-1999; 99US-0134256.  
PR 14-MAY-1999; 99US-0134218.  
PR 14-MAY-1999; 99US-0134219.  
PR 14-MAY-1999; 99US-0134221.  
PR 14-MAY-1999; 99US-0134370.  
PR 18-MAY-1999; 99US-0134768.  
PR 19-MAY-1999; 99US-0134941.  
PR 20-MAY-1999; 99US-0135124.  
PR 21-MAY-1999; 99US-0135353.  
PR 24-MAY-1999; 99US-0135629.  
PR 25-MAY-1999; 99US-0136021.  
PR 27-MAY-1999; 99US-0136392.  
PR 28-MAY-1999; 99US-0136782.  
PR 01-JUN-1999; 99US-0137222.  
PR 03-JUN-1999; 99US-0137528.  
PR 04-JUN-1999; 99US-0137502.  
PR 07-JUN-1999; 99US-0137724.  
PR 08-JUN-1999; 99US-0138094.  
PR 10-JUN-1999; 99US-0138540.  
PR 10-JUN-1999; 99US-0138847.  
PR 14-JUN-1999; 99US-0139119.  
PR 16-JUN-1999; 99US-0139452.  
PR 16-JUN-1999; 99US-0139453.  
PR 17-JUN-1999; 99US-0139492.  
PR 18-JUN-1999; 99US-0139454.  
PR 18-JUN-1999; 99US-0139455.  
PR 18-JUN-1999; 99US-0139456.  
PR 18-JUN-1999; 99US-0139457.  
PR 18-JUN-1999; 99US-0139458.  
PR 18-JUN-1999; 99US-0139459.  
PR 18-JUN-1999; 99US-0139460.  
PR 18-JUN-1999; 99US-0139461.  
PR 18-JUN-1999; 99US-0139462.  
PR 18-JUN-1999; 99US-0139463.  
PR 18-JUN-1999; 99US-0139750.  
PR 18-JUN-1999; 99US-0139763.  
PR 21-JUN-1999; 99US-0139817.



XX AAG54775;  
AC 18-OCT-2000 (first entry)  
XX  
DT  
XX  
XX Arabidopsis thaliana protein fragment SEQ ID NO: 69951.  
DE  
XX Protein identification; signal transduction pathway; metabolic pathway;  
KW hybridisation assay; genetic mapping; gene expression control; promoter;  
KW termination sequence.  
XX  
OS Arabidopsis thaliana.  
XX  
PN EP1033405-A2.  
XX  
PD 06-SEP-2000.  
XX  
PF 25-FEB-2000; 2000EP-0301439.  
XX  
PR 25-FEB-1999; 99US-0121825.  
PR 05-MAR-1999; 99US-0123180.  
PR 09-MAR-1999; 99US-0123548.  
PR 23-MAR-1999; 99US-0125788.  
PR 25-MAR-1999; 99US-0126264.  
PR 29-MAR-1999; 99US-0126785.  
PR 01-APR-1999; 99US-0127462.  
PR 06-APR-1999; 99US-0128234.  
PR 08-APR-1999; 99US-0128714.  
PR 16-APR-1999; 99US-0129845.  
PR 19-APR-1999; 99US-0130077.  
PR 21-APR-1999; 99US-0130449.  
PR 23-APR-1999; 99US-0130510.  
PR 23-APR-1999; 99US-0130891.  
PR 28-APR-1999; 99US-0131449.  
PR 30-APR-1999; 99US-0132048.  
PR 30-APR-1999; 99US-0132407.  
PR 04-MAY-1999; 99US-0132484.  
PR 05-MAY-1999; 99US-0132485.  
PR 06-MAY-1999; 99US-0132486.  
PR 06-MAY-1999; 99US-0132487.  
PR 07-MAY-1999; 99US-0132863.  
PR 11-MAY-1999; 99US-0134256.  
PR 14-MAY-1999; 99US-0134218.  
PR 14-MAY-1999; 99US-0134219.  
PR 14-MAY-1999; 99US-0134221.  
PR 14-MAY-1999; 99US-0134370.  
PR 18-MAY-1999; 99US-0134768.  
PR 19-MAY-1999; 99US-0134941.  
PR 20-MAY-1999; 99US-0135124.  
PR 21-MAY-1999; 99US-0135353.  
PR 24-MAY-1999; 99US-0135629.  
PR 25-MAY-1999; 99US-0136021.  
PR 27-MAY-1999; 99US-0136392.  
PR 28-MAY-1999; 99US-0136782.  
PR 01-JUN-1999; 99US-0137222.  
PR 03-JUN-1999; 99US-0137528.  
PR 04-JUN-1999; 99US-0137502.  
PR 07-JUN-1999; 99US-0137724.  
PR 08-JUN-1999; 99US-0138094.  
PR 10-JUN-1999; 99US-0138540.  
PR 10-JUN-1999; 99US-0138847.  
PR 14-JUN-1999; 99US-0139119.  
PR 16-JUN-1999; 99US-0139452.  
PR 16-JUN-1999; 99US-0139453.  
PR 17-JUN-1999; 99US-0139492.  
PR 18-JUN-1999; 99US-0139454.  
PR 18-JUN-1999; 99US-0139455.  
PR 18-JUN-1999; 99US-0139456.  
PR 18-JUN-1999; 99US-0139457.  
PR 18-JUN-1999; 99US-0139458.  
PR 18-JUN-1999; 99US-0139459.  
PR 18-JUN-1999; 99US-0139460.  
PR 18-JUN-1999; 99US-0139461.

PR 18-JUN-1999; 99US-0139462.  
PR 18-JUN-1999; 99US-0139463.  
PR 18-JUN-1999; 99US-0139750.  
PR 18-JUN-1999; 99US-0139763.  
PR 21-JUN-1999; 99US-0139817.  
PR 22-JUN-1999; 99US-0139899.  
PR 23-JUN-1999; 99US-0140353.  
PR 23-JUN-1999; 99US-0140354.  
PR 24-JUN-1999; 99US-0140695.  
PR 28-JUN-1999; 99US-0140823.  
PR 29-JUN-1999; 99US-0140991.  
PR 30-JUN-1999; 99US-0141287.  
PR 01-JUL-1999; 99US-0141842.  
PR 01-JUL-1999; 99US-0142154.  
PR 02-JUL-1999; 99US-0142055.  
PR 06-JUL-1999; 99US-0142390.  
PR 08-JUL-1999; 99US-0142803.  
PR 09-JUL-1999; 99US-0142920.  
PR 12-JUL-1999; 99US-0142977.  
PR 13-JUL-1999; 99US-0143542.  
PR 14-JUL-1999; 99US-0143624.  
PR 15-JUL-1999; 99US-0144005.  
PR 16-JUL-1999; 99US-0144085.  
PR 16-JUL-1999; 99US-0144086.  
PR 19-JUL-1999; 99US-0144325.  
PR 19-JUL-1999; 99US-0144331.  
PR 19-JUL-1999; 99US-0144332.  
PR 19-JUL-1999; 99US-0144333.  
PR 19-JUL-1999; 99US-0144334.  
PR 19-JUL-1999; 99US-0144335.  
PR 20-JUL-1999; 99US-0144352.  
PR 20-JUL-1999; 99US-0144632.  
PR 20-JUL-1999; 99US-0144884.  
PR 21-JUL-1999; 99US-0144814.  
PR 21-JUL-1999; 99US-0145086.  
PR 21-JUL-1999; 99US-0145088.  
PR 22-JUL-1999; 99US-0145085.  
PR 22-JUL-1999; 99US-0145087.  
PR 22-JUL-1999; 99US-0145089.  
PR 22-JUL-1999; 99US-0145192.  
PR 23-JUL-1999; 99US-0145145.  
PR 23-JUL-1999; 99US-0145218.  
PR 23-JUL-1999; 99US-0145224.  
PR 26-JUL-1999; 99US-0145276.  
PR 27-JUL-1999; 99US-0145913.  
PR 27-JUL-1999; 99US-0145918.  
PR 27-JUL-1999; 99US-0145919.  
PR 28-JUL-1999; 99US-0145951.  
PR 02-AUG-1999; 99US-0146386.  
PR 02-AUG-1999; 99US-0146388.  
PR 02-AUG-1999; 99US-0146389.  
PR 03-AUG-1999; 99US-0147038.  
PR 04-AUG-1999; 99US-0147204.  
PR 04-AUG-1999; 99US-0147302.  
PR 05-AUG-1999; 99US-0147192.  
PR 05-AUG-1999; 99US-0147260.  
PR 06-AUG-1999; 99US-0147303.  
PR 06-AUG-1999; 99US-0147416.  
PR 09-AUG-1999; 99US-0147493.  
PR 09-AUG-1999; 99US-0147935.  
PR 10-AUG-1999; 99US-0148171.  
PR 11-AUG-1999; 99US-0148319.  
PR 12-AUG-1999; 99US-0148341.  
PR 13-AUG-1999; 99US-0148565.  
PR 13-AUG-1999; 99US-0148684.  
PR 16-AUG-1999; 99US-0149368.  
PR 17-AUG-1999; 99US-0149175.  
PR 18-AUG-1999; 99US-0149426.  
PR 20-AUG-1999; 99US-0149722.  
PR 20-AUG-1999; 99US-0149723.  
PR 20-AUG-1999; 99US-0149929.  
PR 23-AUG-1999; 99US-0149902.  
PR 23-AUG-1999; 99US-0149930.

Search completed: June 19, 2002, 08:43:43  
Job time: 238 sec

PR	25-AUG-1999;	99US-0150566.	
PR	26-AUG-1999;	99US-0150884.	
PR	27-AUG-1999;	99US-0151065.	
PR	27-AUG-1999;	99US-0151066.	
PR	27-AUG-1999;	99US-0151080.	
PR	30-AUG-1999;	99US-0151303.	
PR	31-AUG-1999;	99US-0151438.	
PR	01-SEP-1999;	99US-0151930.	
PR	07-SEP-1999;	99US-0152363.	
PR	10-SEP-1999;	99US-0153070.	
PR	13-SEP-1999;	99US-0153758.	
PR	15-SEP-1999;	99US-0154018.	
PR	16-SEP-1999;	99US-0154039.	
PR	20-SEP-1999;	99US-0154779.	
PR	22-SEP-1999;	99US-0155139.	
PR	23-SEP-1999;	99US-0155486.	
PR	24-SEP-1999;	99US-0155659.	
PR	28-SEP-1999;	99US-0156458.	
PR	29-SEP-1999;	99US-0156596.	
PR	04-OCT-1999;	99US-0157117.	
PR	05-OCT-1999;	99US-0157753.	
PR	06-OCT-1999;	99US-0157865.	
PR	07-OCT-1999;	99US-0158029.	
PR	08-OCT-1999;	99US-0158232.	
PR	12-OCT-1999;	99US-0158369.	
PR	13-OCT-1999;	99US-0159293.	
PR	13-OCT-1999;	99US-0159294.	
PR	13-OCT-1999;	99US-0159295.	
PR	14-OCT-1999;	99US-0159329.	
PR	14-OCT-1999;	99US-0159330.	
PR	14-OCT-1999;	99US-0159331.	
PR	14-OCT-1999;	99US-0159637.	
PR	14-OCT-1999;	99US-0159638.	
PR	18-OCT-1999;	99US-0159584.	
PR	21-OCT-1999;	99US-0160741.	
PR	21-OCT-1999;	99US-0160767.	
PR	21-OCT-1999;	99US-0160768.	
PR	21-OCT-1999;	99US-0160770.	
PR	21-OCT-1999;	99US-0160814.	
PR	21-OCT-1999;	99US-0160815.	
PR	22-OCT-1999;	99US-0160980.	
PR	22-OCT-1999;	99US-0160981.	
PR	22-OCT-1999;	99US-0160989.	
PR	25-OCT-1999;	99US-0161404.	
PR	25-OCT-1999;	99US-0161405.	
PR	25-OCT-1999;	99US-0161406.	
PR	26-OCT-1999;	99US-0161359.	
PR	26-OCT-1999;	99US-0161360.	
PR	26-OCT-1999;	99US-0161361.	
PR	28-OCT-1999;	99US-0161920.	
PR	28-OCT-1999;	99US-0161992.	
PR	28-OCT-1999;	99US-0161993.	
PR	29-OCT-1999;	99US-0162142.	
Query Match 32.0%; Score 588; DB 21; Length 293;			
Best Local Similarity 58.1%; Pred. NO. 3.2e-46;			
Matches 111; Conservative 33; Mismatches 47; Indels 0; Gaps 0;			
QY	163 YSDFQGPYIGSTAVVALIRGNKLFVANAGDSRCIMSRERGEAVNLSIDHKPNLEHERKRIE	222	
Db	:             :            :   :           :     :		
Db	89 hsdftgptsgctacavalikdkklfvanagdsrvcvisrksqaynlskdkhkpdlvekeril	148	
QY	223 SAGGFVHGGRVNGSLNLTIRAIGDMFEKGRPDLPDQVVTCCPDVVEVDLPGGDEFIVLA	282	
Db	:     :                   :      :       :		
QY	149 kaggfihagringslnltiraigdmefkqkflpsekqmvtdpdtintidlcdddfllva	208	
QY	283 CDGIWDMSSQAVVDFVKSRLPPTTKTLSSLCEILDYCLSPTRQOEGCDNMSIIIVQPK	342	
Db	:     :   :   :   :   :   :        :   :		
QY	209 cdgiwdcmssqelvdffiheqlksetklstvcekvvdrcrlapdtatgagcdnmtiilvqfk	268	
QY	343 QSGVAASSSTD	353	
Db	: : :		
Db	269 kpnpsetepe	279	